Order No. MD0303097C2

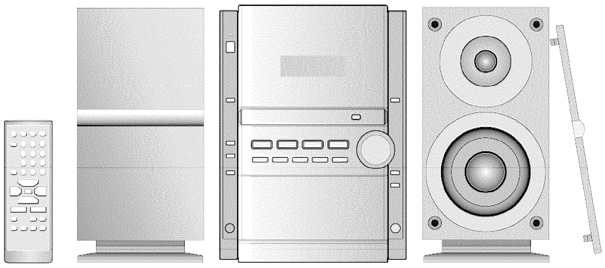
Service Manual

CD Stereo System

SA-PM18E / SA-PM18EB / SA-PM18EG

Color

(S) ... Silver Type


Remote Control Transmitter
SB-PM18
SA-PM18
SB-PM18

SPECIFICATIONS

Specification

■ Amplifier Section

RMS Power output	
10% Total harmonic distortion	
1 kHz, both channels driven (Low channel)	30 W per channel (6 Ω)
8 kHz, both channels driven (High channel)	30 W per channel (6 Ω)
Total Bi-Amp power	60 W per channel
Input sensitivity	
AUX	250 mV
Input impedance	
AUX	19.8 kΩ

■ FM Tuner Section

Frequency range	87.5 - 108.0 MHz (50 kHz steps)
Sensitivity	1.4 μV (IHF)
S/N 26 dB	1 μV
Antenna terminal(s)	75 Ω (unbalanced)

■ AM Tuner Section

Frequency range	522 - 1629 kHz (9 kHz steps) 520 - 1630 kHz (10 kHz steps)
Sensitivity	
S/N 20 dB (at 999 kHz)	560 μV/m

■ Cassette Deck Section

Track system	4 track, 2 channel
Heads	
Record/playback	Solid permalloy head
Erasure	Double gap ferrite head
Motor	DC servo motor
Recording system	AC bias 100 kHz
Erasing system	AC erase 100 kHz
Tape speed	4.8 cm/s
Overall frequency response (+3 to -6 dB at Deck Out)	
Normal (Type I)	35 Hz - 14 kHz
S/N	50 dB (A weighted)
Wow and flutter	0.18% (WRMS)
Fast forward and rewind times	Approx. 120 seconds with C-60 cassette tape

■ CD Section

Sampling frequency	44.1 kHz
Decoding	16 bit linear
Pickup	
Beam source/ Wavelength	Semiconductor laser / 780 nm
Number of channels	Stereo
Frequency response	20 Hz n- 20 kHz (+1, -2dB)
Wow and flutter	Below measurable limit

Digital filter	**8 fs**
D/A converter	**MASH (1 bit DAC)**
■ General	
Power supply	
For EB only	**AC 230 - 240 V, 50 Hz**
For E & EG only	**AC 230 V, 50 Hz**
Power consumption	**105 W**
Power consumption (Standby mode)	**Approx. 0.7 W**
Dimensions (W x H x D)	**179 x 247 x 378 mm**
Mass	**5.25 kg**
■ System: SC-PM18 (E)	**Music Center: SA-PM18 (E)**
	Speaker: SB-PM18 (P)
■ System: SC-PM18 (EB)	**Music Center: SA-PM18 (EB)**
	Speaker: SB-PM18 (P)
■ System: SC-PM18 (EG)	**Music Center: SA-PM18 (EG)**
	Speaker: SB-PM18 (EG)

Notes:

1. **Specifications are subject to change without notice. / Mass and dimensions are approximate.**
2. **Total harmonic distortion is measured by the digital spectrum analyzer.**

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⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

1. Before Repair and Adjustment

Disconnect AC power, discharge Power Supply Capacitors C506, C507, C508, C576, C587, C588, C601, C602 and C615 through a 10 Ω, 5 W resistor to ground. DO NOT SHORT-CIRCUIT DIRECTLY (with a screw driver blade, for instance), as this may destroy solid state devices.
After repairs are completed, restore power gradually using a variac, to avoid over current.
Current consumption at AC 230 V, 50 Hz in NO SIGNAL mode should be ~300 mA.

2. Protection Circuitry

The protection circuitry may have operated if either of the following conditions are noticed:

- No sound is heard when the power is turned on.

- Stops during a performance.

The function of this circuitry is to prevent circuitry damage if, for example, the positive and negative speaker connection wires are “shorted”, or if speaker systems with an impedance less than the indicated rated impedance of the amplifier are used.
If this occurs, follow the procedure outlines below:

1. Turn off the power.

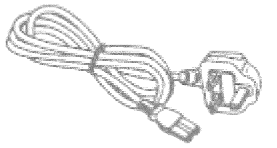
2. Determine the cause of the problem and correct it.

3. Turn on the power once again after one minute.

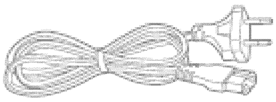
Note:
When the protection circuitry functions, the unit will not operate unless the power is first turned off and then on again.

3. Accessories

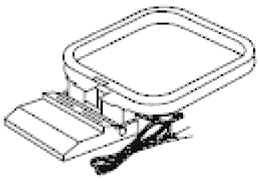
AC Main Lead .....(For EB only)



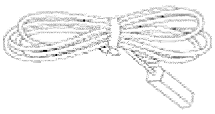
AC Main Lead .....(For E & EG only)



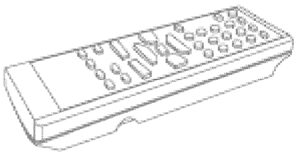
AM Loop Antenna



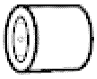
FM Indoor Antenna



Remote Control Transmitter



Antenna plug adaptor .....(For EB only)



4. Caution for AC Main Lead

(For "EB" area code model only.)

For your safety, please read the following text carefully.

This appliance is supplied with a moulded three pin mains plug for your safety and convenience.
A 5-ampere fuse is fitted in this plug.
Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 5-ampere and that it is approved by ASTA or BSI to BS1362.

Check for the ASTA mark or the BSI mark on the body of the fuse.

If the plug contains a removable fuse cover you must ensure that it is refitted when the fuse is replaced.
If you lose the fuse cover, the plug must not be used until a replacement cover is obtained.
A replacement fuse cover can be purchased from your local dealer.

CAUTION!
IF THE FITTED MOULDED PLUG IS UNSUITABLE FOR THE SOCKET OUTLET IN YOUR HOME THEN THE FUSE SHOULD BE REMOVED AND THE PLUG CUT OFF AND DISPOSED OFF SAFELY.
THERE IS A DANGER OF SEVERE ELECTRICAL SHOCK IF THE CUT OFF PLUG IS INSERTED INTO ANY 13-AMPERE SOCKET.

If a new plug is to be fitted, please observe the wiring code as shown below.
If in any doubt please consult a qualified electrician.

IMPORTANT

The wires in this mains lead are coloured in accordance with the following code:

Blue:	Neutral
Brown:	Live

As these colours may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:
The wire which is coloured Blue must be connected to the terminal which is marked with the letter N or coloured Black or Blue.

The wire which is coloured Brown must be connected to the terminal which is marked with the letter L or coloured Brown or Red.

WARNING: DO NOT CONNECT EITHER WIRE TO THE EARTH TERMINAL WHICH IS MARKED WITH THE LETTER E, BY THE EARTH SYMBOL ⏚ OR COLOURED GREEN OR GREEN/YELLOW.

THIS PLUG IS NOT WATERPROOF—KEEP DRY.

Before use

Remove the connector cover.

How to replace the fuse

The location of the fuse differ according to the type of AC mains plug (figures A and B). Confirm the AC mains plug fitted and follow the instructions below.
Illustrations may differ from actual AC mains plug.

1. Open the fuse cover with a screwdriver.

Figure A

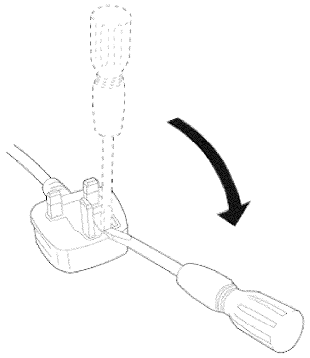
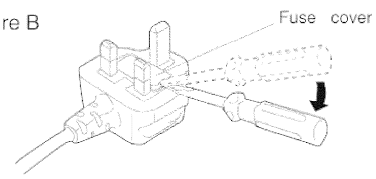


Figure B



2. Replace the fuse and close or attach the fuse cover.

Figure A

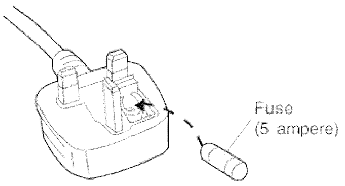
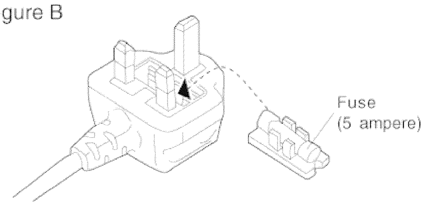
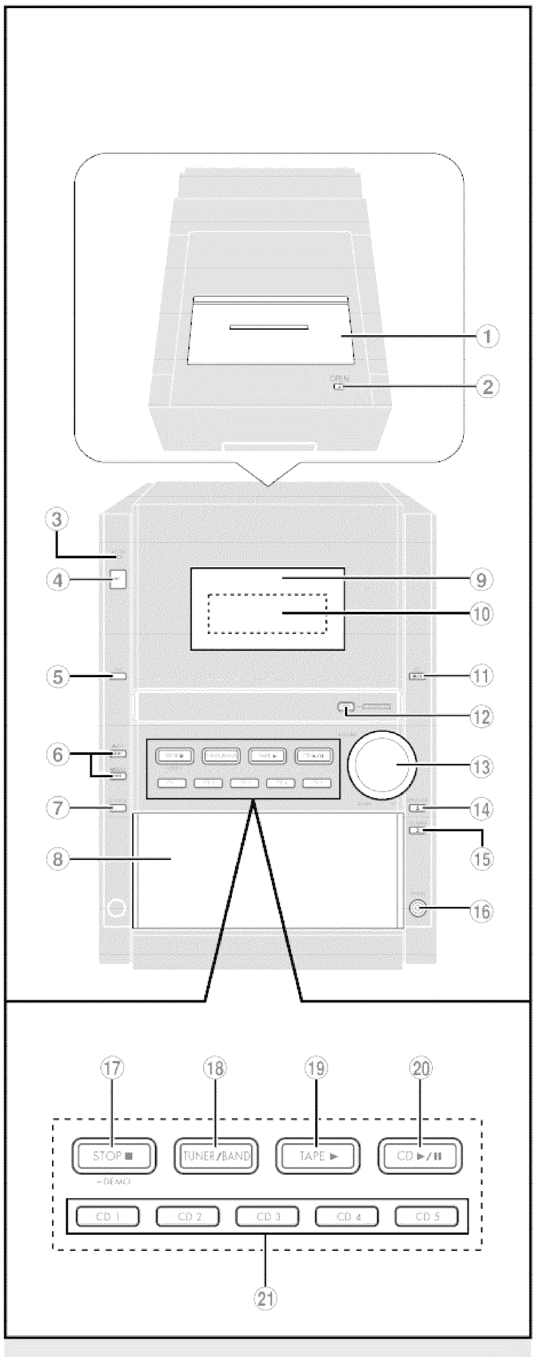


Figure B



5. Front Panel Controls



Front panel controls

Main unit

① **Cassette lid**

② **Cassette open button (≜ OPEN)**

③ **AC supply indicator (AC IN)**
This indicator lights when the unit is connected to the AC mains supply.

④ **Standby/on switch (⏻/I)**
Press to switch the unit from on to standby mode or vice versa. In standby mode, the unit is still consuming a small amount of power.

⑤ **Aux button (AUX)**

⑥ **CD skip/search, tape fast-forward/rewind/TPS, tune/preset channel select, time adjust buttons (►►I ∧/FF, I◄◄ ∨/REW)**

⑦ **CD check button (CD CHECK)**

⑧ **CD trays**

⑨ **Tape indicator**
This indicator changes in the following manner:
ⓐ Orange (when no cassette is inserted.)
ⓑ Green (when cassette is inserted.)
ⓒ Red (when in recording mode.)

⑩ **Display**

⑪ **Recording start/pause button (●/II REC)**

⑫ **Super sound EQ button (S.SOUND EQ)**

⑬ **Volume control (VOLUME DOWN, UP)**

⑭ **CD tray open/close button (≜ OPEN/CLOSE)**

⑮ **CD change button (≜ CD CHANGE)**

⑯ **Headphone jack (PHONES)**

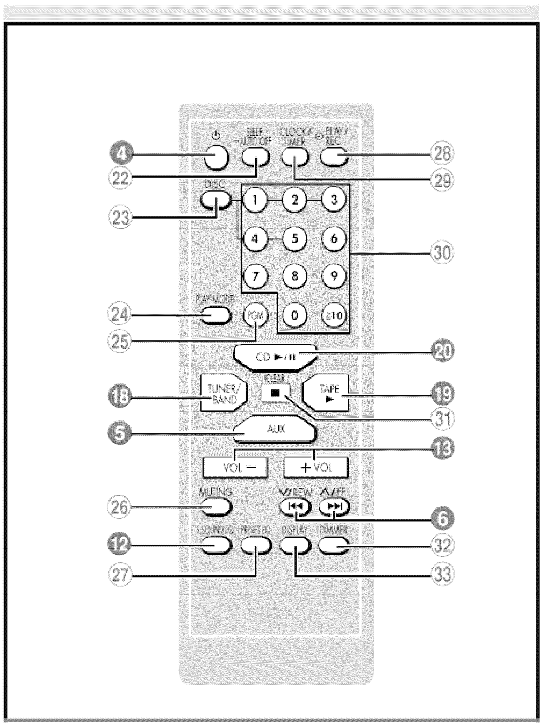
⑰ **Stop/program clear and demonstration button (STOP ■, –DEMO)**

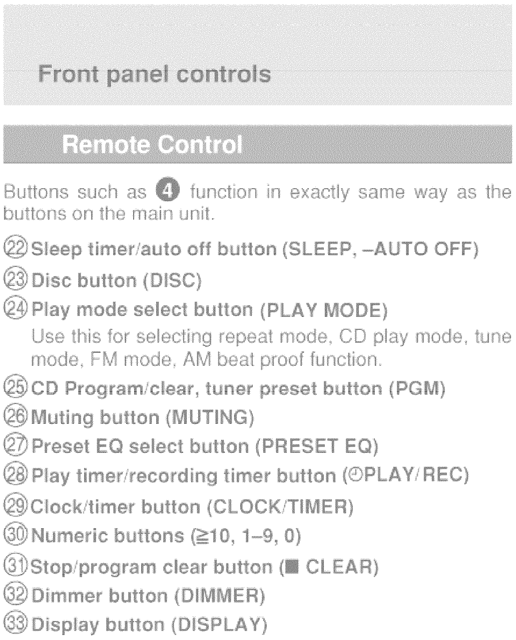
⑱ **Tuner/band select button (TUNER/BAND)**

⑲ **Cassette play button (TAPE ►)**

⑳ **CD play/pause button (CD ►/II)**

㉑ **Disc direct play buttons (CD 1~CD 5)**





Front panel controls

Remote Control

Buttons such as ④ function in exactly same way as the buttons on the main unit.

㉒Sleep timer/auto off button (SLEEP, –AUTO OFF)

㉓Disc button (DISC)

㉔Play mode select button (PLAY MODE)

Use this for selecting repeat mode, CD play mode, tune mode, FM mode, AM beat proof function.

㉕CD Program/clear, tuner preset button (PGM)

㉖Muting button (MUTING)

㉗Preset EQ select button (PRESET EQ)

㉘Play timer/recording timer button (⏲PLAY/REC)

㉙Clock/timer button (CLOCK/TIMER)

㉚Numeric buttons (≧10, 1–9, 0)

㉛Stop/program clear button (■ CLEAR)

㉜Dimmer button (DIMMER)

㉝Display button (DISPLAY)

6. Handling the Lead-free Solder

6.1. About lead free solder (PbF)

Distinction of PbF P.C.B.:

P.C.B.s (manufactured) using lead free solder will have a PbF stamp on the P.C.B.

Caution:

- **Pb free solder has a higher melting point than standard solder; Typically the melting point is 50 - 70°F (30 - 40°C) higher. Please use a high temperature soldering iron. In case of soldering iron with temperature control, please set it to 700 ± 20°F (370 ± 10°C).**
- **Pb free solder will tend to splash when heated too high (about 1100°F/ 600°C).**
- **When soldering or unsoldering, please completely remove all of the solder on the pins or solder area, and be sure to heat the soldering points with the Pb free solder until it melts enough.**

7. Handling Precautions For Traverse Deck

The laser diode in the traverse deck (optical pickup) may break down due to potential difference caused by static electricity of clothes or human body. So, be careful of electrostatic breakdown during repair of the traverse deck (optical pickup).

- **Handling of traverse deck (optical pickup)**

1. **Do not subject the traverse deck (optical pickup) to static electricity as it is extremely sensitive to electrical shock.**
2. **To prevent the breakdown of the laser diode, an antistatic shorting pin is inserted into the flexible board (FFC board).**

3. **Take care not to apply excessive stress to the flexible board (FFC board). When removing or connecting the short pin, finish the job in as short time as possible.**
4. **Do not turn the variable resistor (laser power adjustment). It has already been adjusted.**

- Grounding for electrostatic breakdown prevention

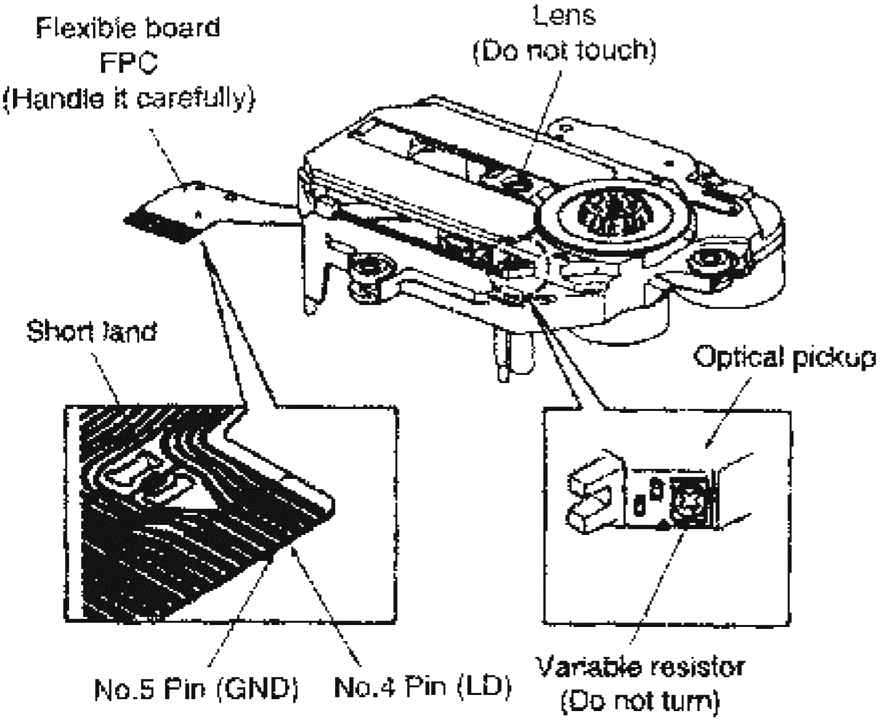
1. **Human body grounding**
   Use the anti-static wrist strap to discharge the static electricity from your body.
2. **Work table grounding.**
   Put a conductive material (sheet) or steel sheet on the area where the traverse deck (optical pickup) is place, and ground the sheet.

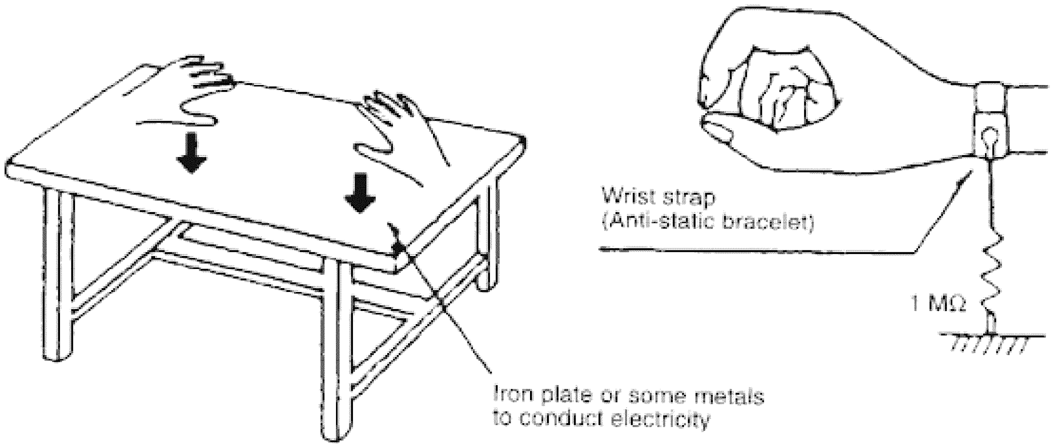
Caution:

The static electricity of your clothes will not be grounded through the wrist strap. So, take care not to let your clothes touch the traverse deck (optical pickup).

on when replacing the Traverse Deck

The traverse deck has a short point shorted with solder to protect the laser diode against electrostatics breakdown. Be sure to remove the solder from the short point before making connections.


Flexible board
FPC
(Handle it carefully)
Lens
(Do not touch)
Short land
Optical pickup
No.5 Pin (GND)
No.4 Pin (LD)
Variable resistor
(Do not turn)



8. Disassembly and Main Component Replacement Procedures.

"ATTENTION SERVICER"
Some chassis components maybe have sharp edges. Be careful when diassembling and servicing.

1. **This section describes procedures for checking the operation of the major printed circuit boards and replacing the main components.**
2. **For reassembly after operation checks or replacement, reverse the respective procedures. / Special reassembly procedures are described only when required.**
3. **Select items from the following index when checks or replacement are required.**
4. **Refer the Parts No. on the page of "Main component Replacement Procedures", if necessary.**

Content

- **Disassembly Procedure for each major P.C.B.**
- **Disassembly of CD Loading Unit**
- **Disassembly of CD Loading Section**
- **Disassembly of Traverse Mechanism**
- **Main Component Replacement Procedures**
  1. **dure of replacing Cassette Holder**
  2. **Procedure of replacing Pinch Roller and Head Block (Cassette**

Mechanism Unit)

3. Procedure of replacing Motor, Capstan Belt A, Capstan Belt B and Winding Belt (Cassette Mechanism Unit)
4. Procedure of replacing Parts on Mechanism P.C.B
5. Replacement of CD Traverse Deck
6. Replacement of Optical Pickup Unit (CD Mechanism)
7. Replacement of a Traverse Gear A and a Traverse Gear B
8. Replacement of Disk Tray
9. Replacement of the Traverse Mechanism
10. Replacement of CD Loading Unit

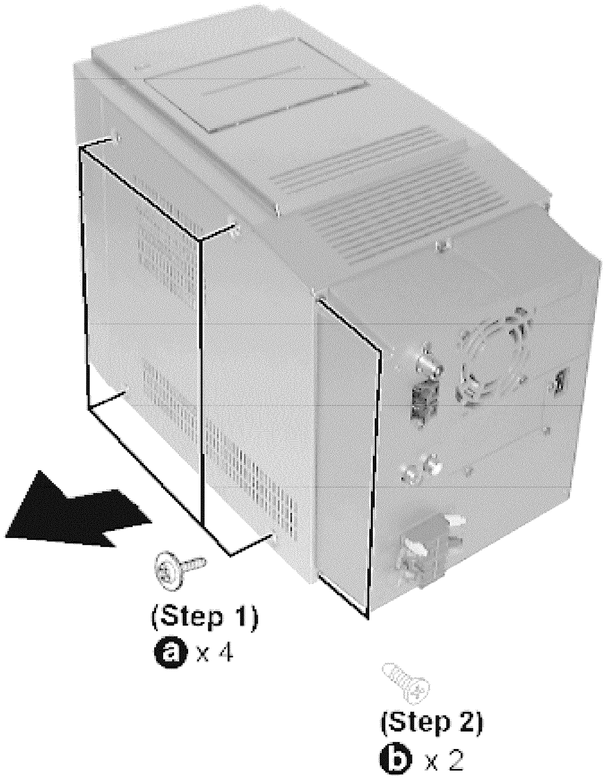
- Assembly of CD Loading Unit
- Handling of Cassette Tape jam

Warning:

This product uses a laser diode. Refer to “Precaution of Laser Diode”.

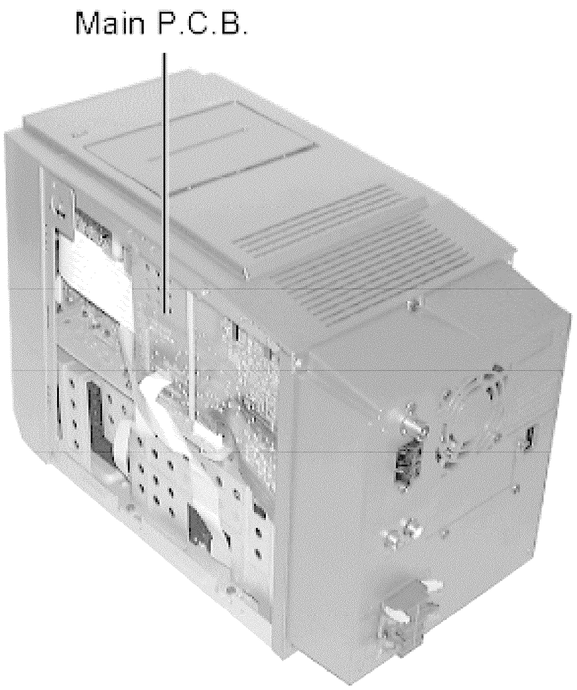
8.1. Checking for Major P.C.B.

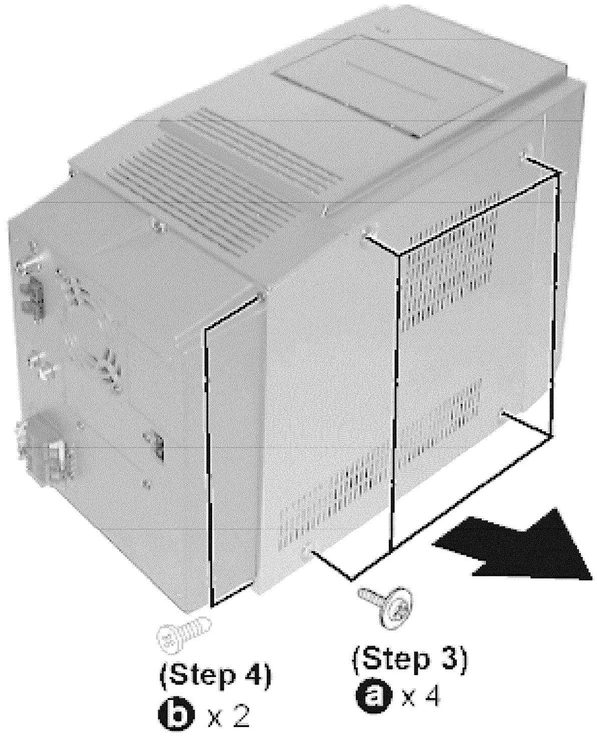
8.1.1. Checking for Main & Transformer P.C.B.



Step 1 & 2 Remove 6 screws.

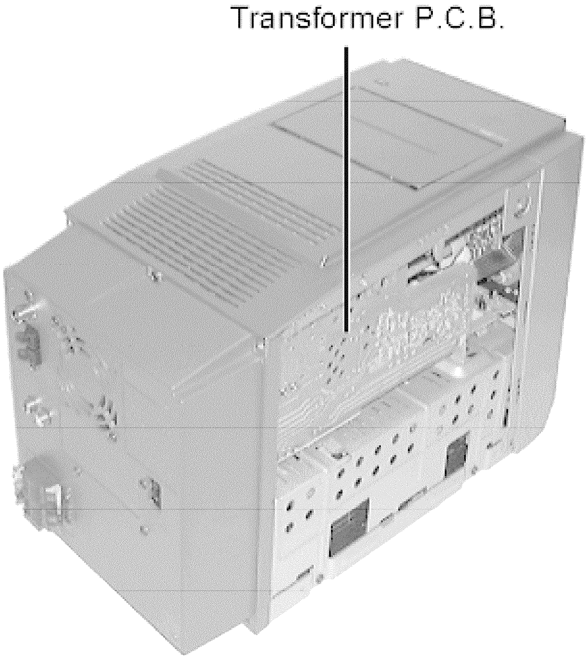
- Checking Main P.C.B.




(Step 4)
b x 2
(Step 3)
a x 4

Step 3 & 4 Remove 6 screws .

- Checking for Transformer P.C.B.

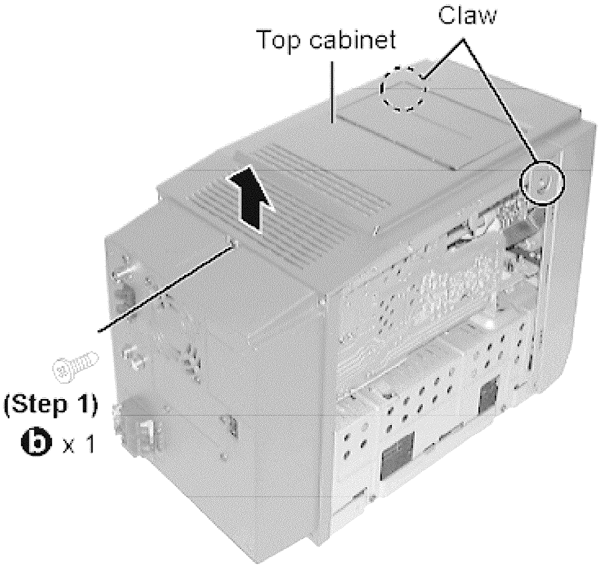

Transformer P.C.B.

8.1.2. Checking for Deck P.C.B., Tape Eject P.C.B. & Deck Mechanism P.C.B.

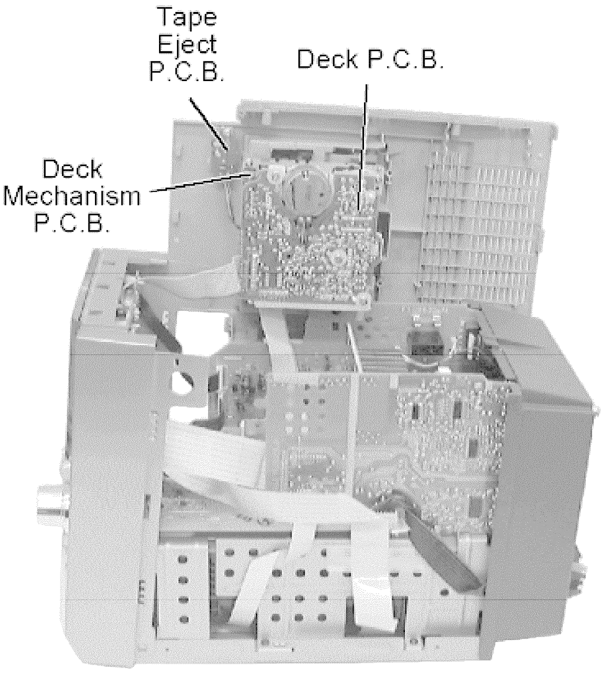
- Follow the (Step 1) - (Step 4) of Item 8.1.1.

Step 1 Remove one screw at the rear panel.

Step 2 Release claws at both ends, and lift up the top unit (Deck Mechanism Unit).


Claw
Top cabinet
(Step 1)
b x 1

- Checking for Deck P.C.B., Tape Eject P.C.B. & Deck Mechanism P.C.B.

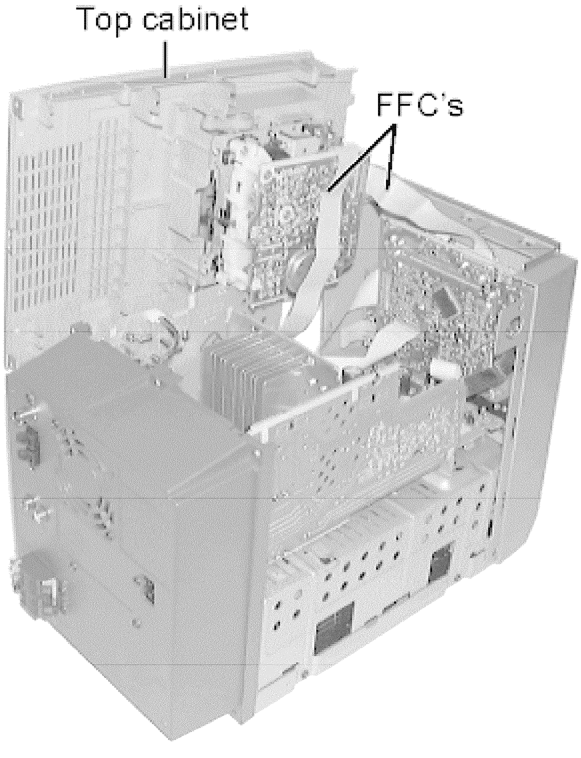

Tape Eject P.C.B.
Deck P.C.B.
Deck Mechanism P.C.B.

8.1.3. Checking for Panel P.C.B.

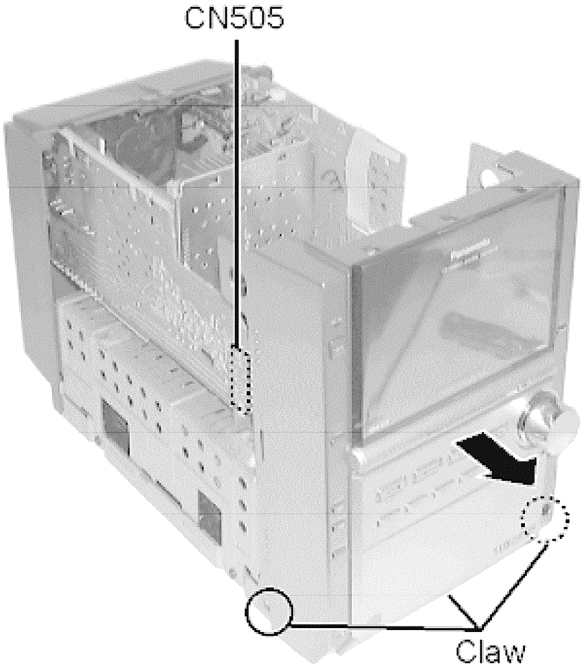
- Follow the (Step 1) - (Step 4) of Item 8.1.1.

- Follow the (Step 1) - (Step 2) of Item 8.1.2.

Step 1 Release connector CN1303 & CN1304. Turn the Top cabinet.


Top cabinet
FFC's

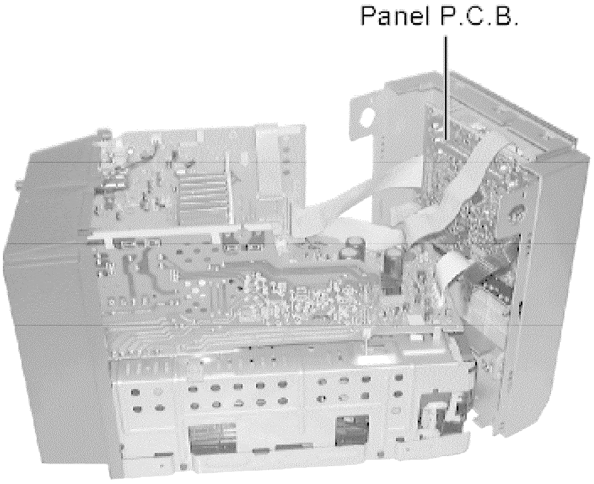
Step 2 Release 3 claws. Disconnect CN505 & CN500.



Step 3 Push front panel forward as arrow shown.

Step 4 Reconnect connectors (CN1303, CN1304, CN500 and CN505) for checking operation for main unit.

- Checking for Panel P.C.B.



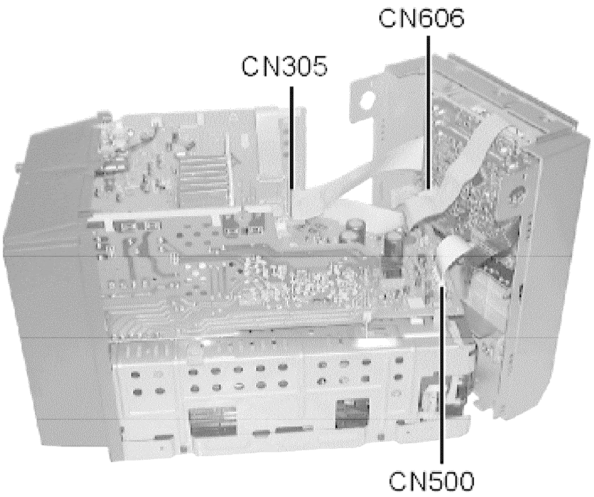
8.1.4. Checking for Headphone P.C.B., AC Led P.C.B. Tact Switch P.C.B.

- Follow the (Step 1) - (Step 4) of Item 8.1.1.

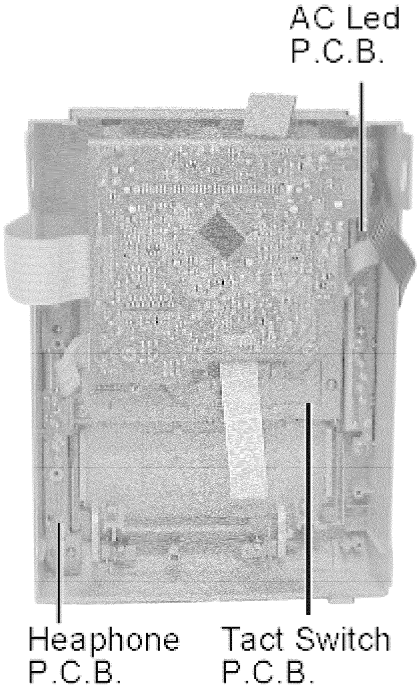
- Follow the (Step 1) - (Step 2) of Item 8.1.2.

- Follow the (Step 1) - (Step 4) of Item 8.1.3.

Step 1 Disconnect CN305, CN606 and CN500.


CN606
CN305
CN500

- Checking for Headphone, AC Led & Tact Switch P.C.B.


AC Led
P.C.B.
Heaphone
P.C.B.
Tact Switch
P.C.B.

8.1.5. Checking for CD Servo P.C.B. & CD Loading P.C.B.

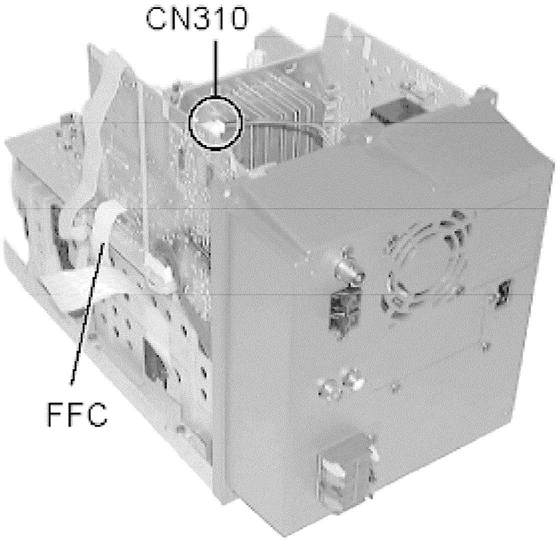
- Follow the (Step 1) - (Step 4) of Item 8.1.1.

- Follow the (Step 1) - (Step 2) of Item 8.1.2.

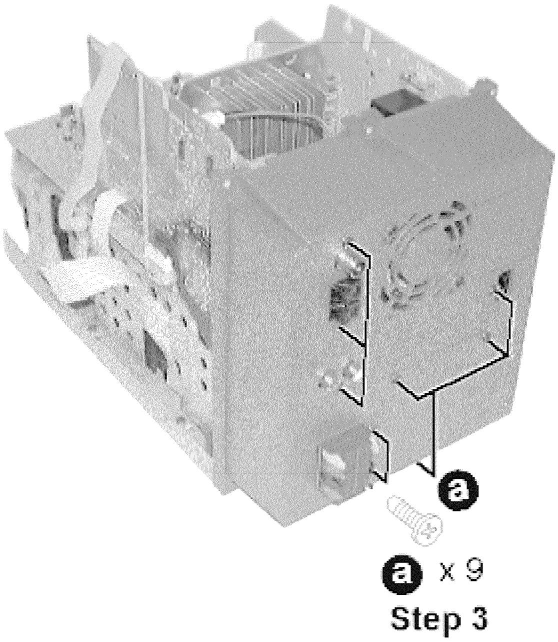
- Follow the (Step 1) - (Step 4) of Item 8.1.3.

- Follow the (Step 1) of Item 8.1.4.

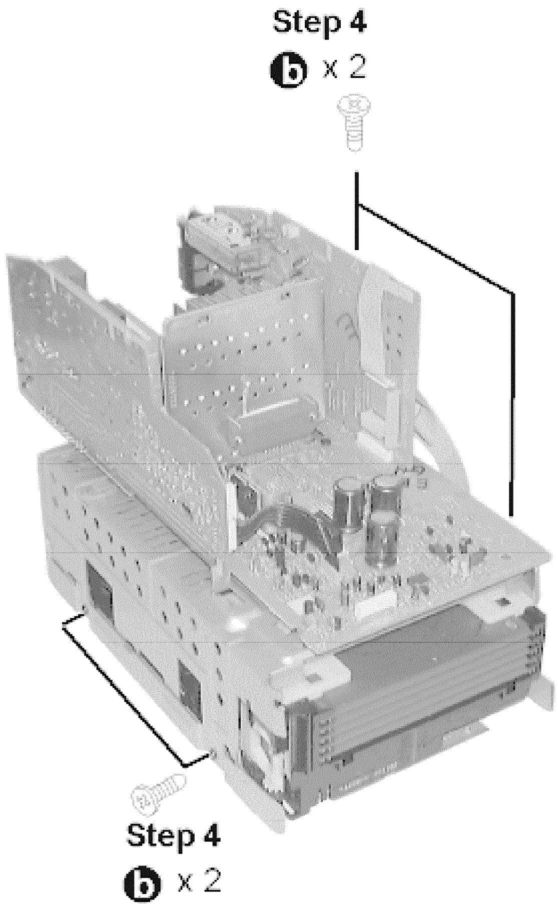
Step 1 Remove FFC and connector CN310.



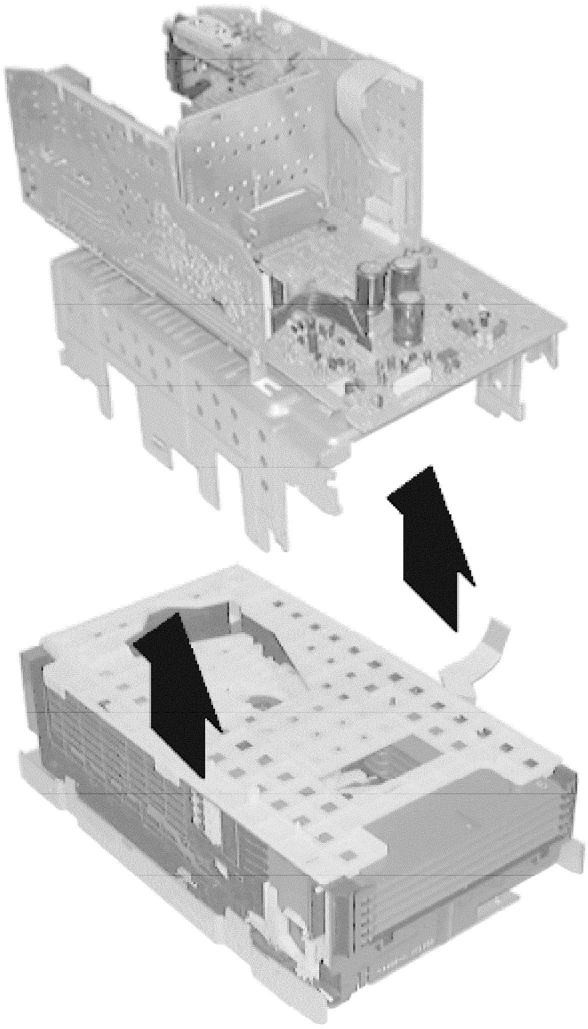
Step 2 Remove FFC and connector CN310. (Fan unit)



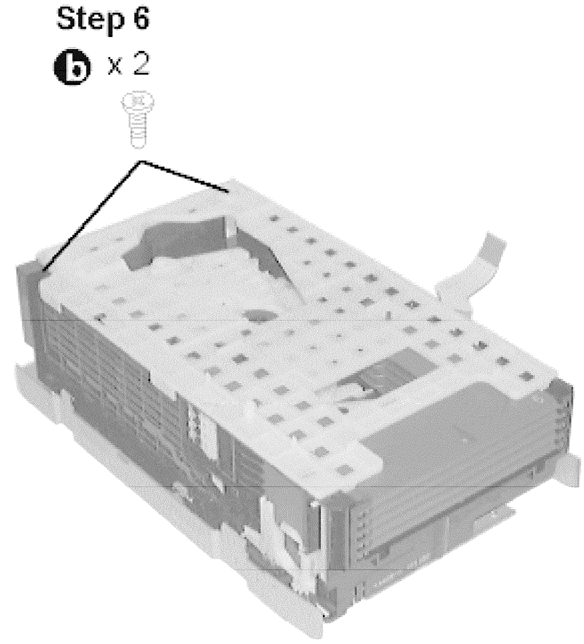
Step 3 Remove all screws for back cabinet.


Step 4
b x 2
Step 4
b x 2

Step 4 Remove all screws.

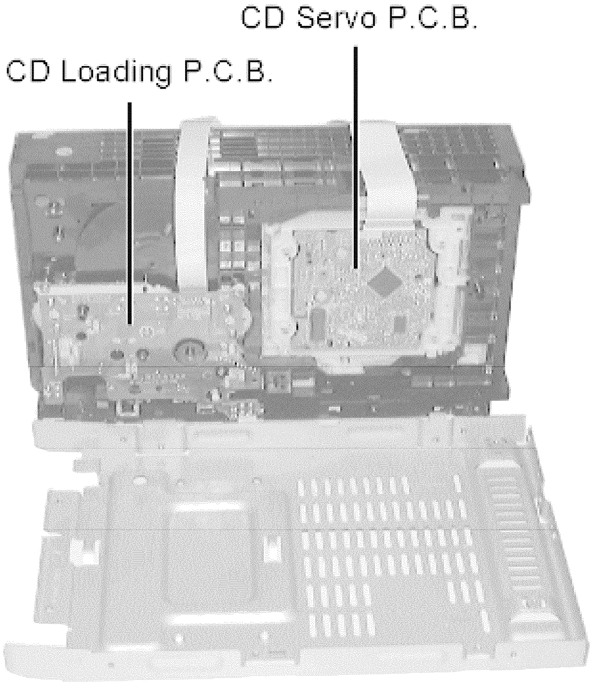


Step 5 Pull up the middle unit as the arrow shown.



Step 6 Remove 2 screws.

- Checking for CD Servo P.C.B. and CD Loading P.C.B.


CD Servo P.C.B.
CD Loading P.C.B.

8.1.6. Replacement of the Power Amplifier IC

- Replacement of the Power Amplifier IC

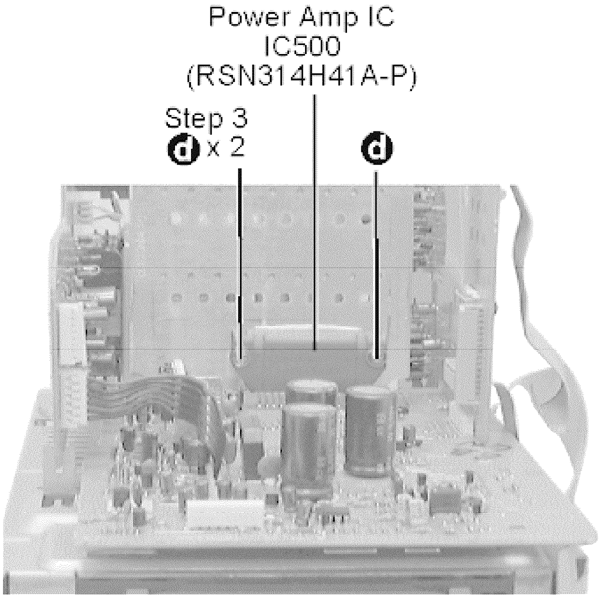
- Follow the (Step 1) - (Step 4) of Item 8.1.1.

- Follow the (Step 1) - (Step 2) of Item 8.1.2.

- Follow the (Step 1) - (Step 4) of Item 8.1.3.

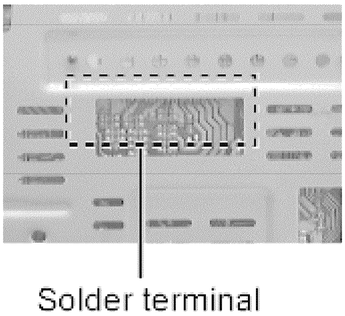
- Follow the (Step 1) of Item 8.1.4.

- Follow the (Step 1) - (Step 6) of Item 8.1.5.


Power Amp IC
IC500
(RSN314H41A-P)
Step 3
d x 2
d

Step 1 Remove 2 connector CP501 and CP504 and pull out the Main P.C.B.

Step 2 Remove 2 screws fixed to the Power Amp I.C.

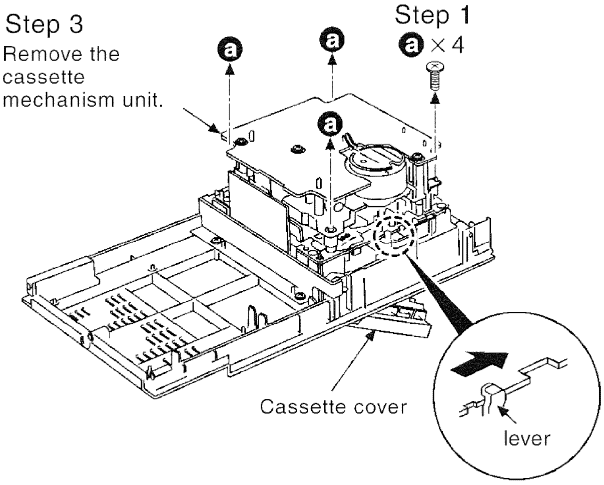

Solder terminal

Step 4 Unsolder the terminals of Power Amp IC, transistor and replace the component.

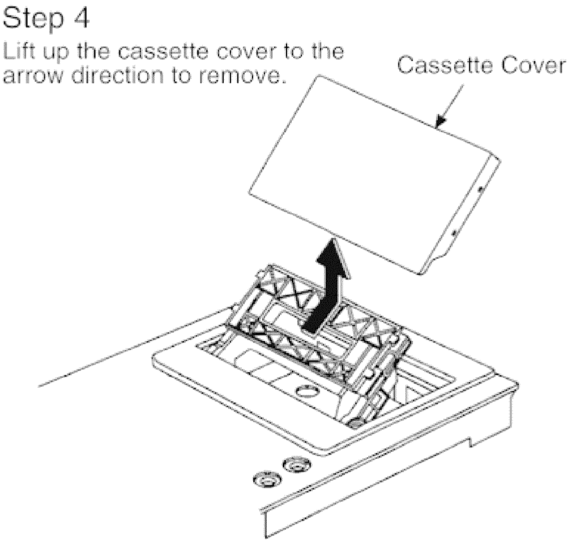
8.2. Procedure for Replacing Cassette Holder

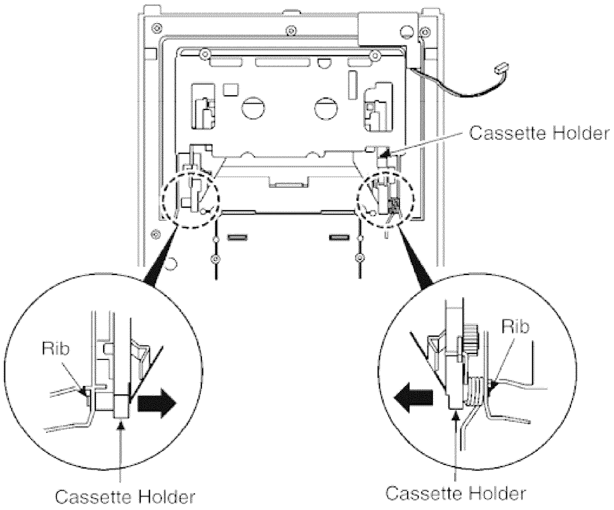
- Follow the (Step 1) - (Step 4) of Item 8.1.1.

- Follow the (Step 1) - (Step 2) of Item 8.1.2.


Step 3
Remove the cassette mechanism unit.
Step 1
ⓐ × 4
ⓐ
ⓐ
ⓐ
Cassette cover
lever

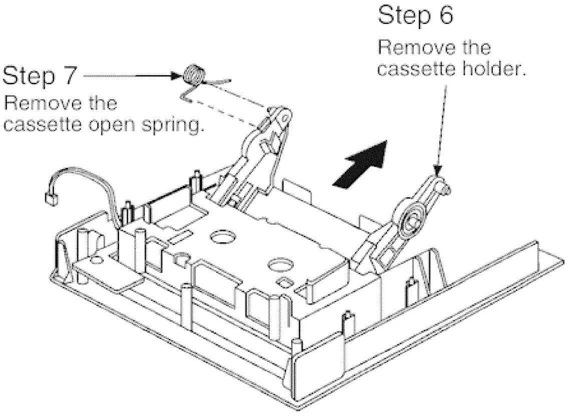
Step 2 Press the lever to open the cassette cover.


Step 4
Lift up the cassette cover to the arrow direction to remove.
Cassette Cover



Step 5
Pull out the ribs of the cassette holder to the arrow direction.

Cassette Holder
Rib
Rib
Cassette Holder
Cassette Holder



Step 6
Remove the cassette holder.

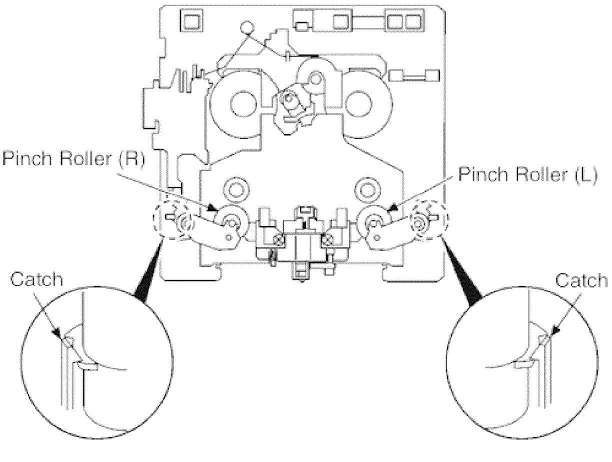
Step 7
Remove the cassette open spring.

8.3. Procedure for Replacing Pinch Roller and Head Block (Cassette Mechanism Unit)

- Follow the (Step 1) - (Step 4) of Item 8.1.1.

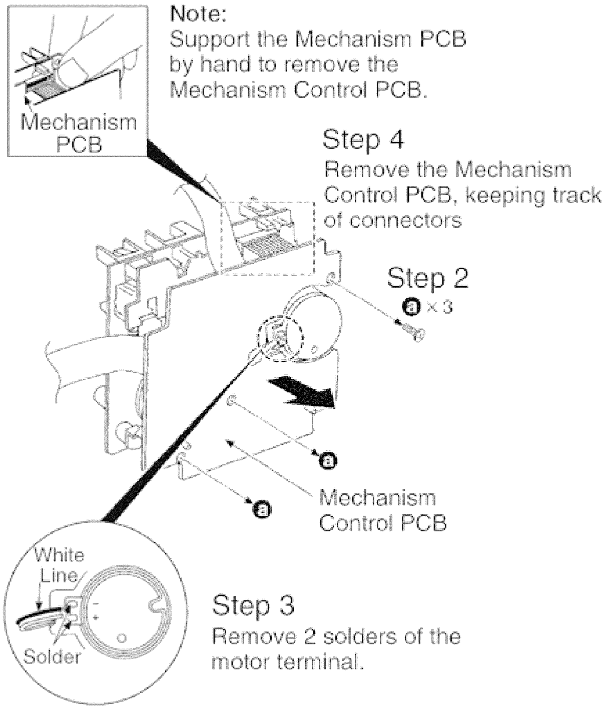
- Follow the (Step 1) - (Step 2) of Item 8.1.2.

- Follow the (Step 1) - (Step 4) of Item 8.2.



Step 1
Release catches to remove the pinch rollers (R) and (F).

Pinch Roller (R)
Pinch Roller (L)
Catch
Catch



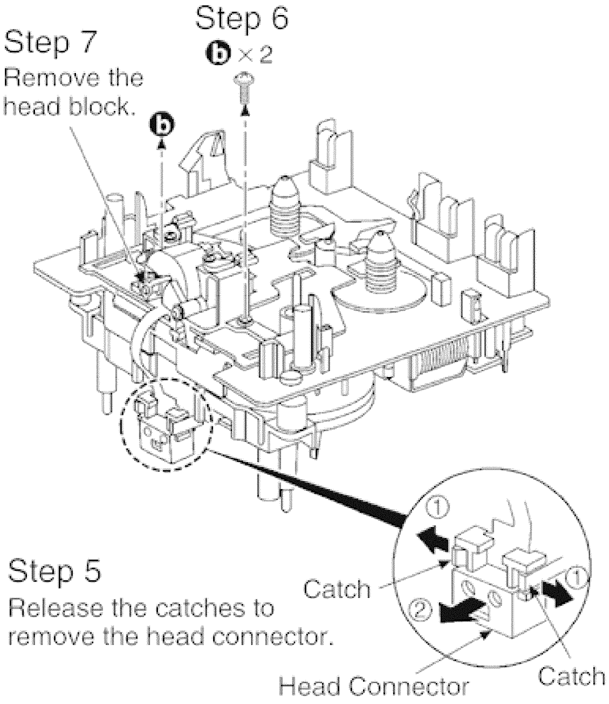
Note:
Support the Mechanism PCB by hand to remove the Mechanism Control PCB.

Step 4
Remove the Mechanism Control PCB, keeping track of connectors

Step 2
ⓐ × 3

Step 3
Remove 2 solders of the motor terminal.

Mechanism PCB
ⓐ
ⓐ
Mechanism Control PCB
White Line
Solder



Step 7
Remove the head block.

Step 6
ⓑ × 2

Step 5
Release the catches to remove the head connector.

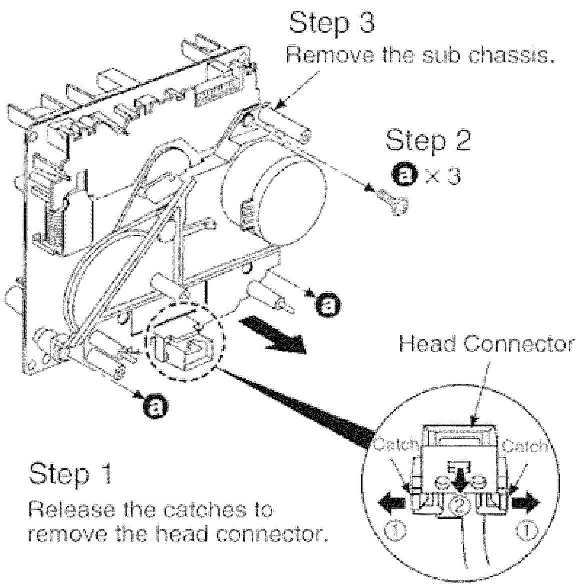
ⓑ
①
①
②
Catch
Catch
Head Connector

8.4. Procedure for Replacing Motor, Capstan Belt A, Capstan Belt B, and Winding Belt (Cassette Mechanism Unit)

- Follow the (Step 1) - (Step 4) of Item 8.1.1.

- Follow the (Step 1) - (Step 2) of Item 8.1.2.

- Follow the (Step 1) - (Step 4) of Item 8.2.

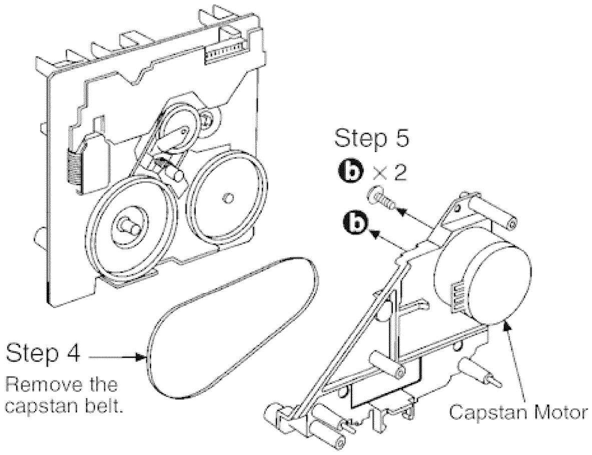


Head Connector
Catch
Catch
②
①
①
a
a
a

Step 3
Remove the sub chassis.

Step 2
a × 3

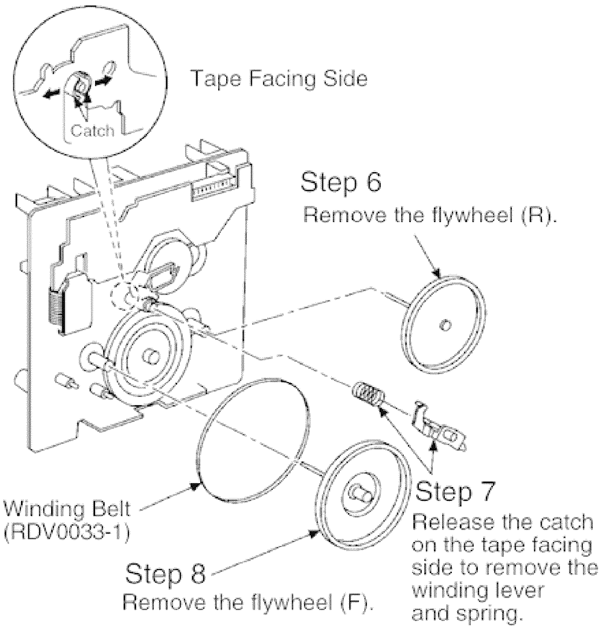
Step 1
Release the catches to remove the head connector.



Capstan Motor
b

Step 5
b × 2

Step 4
Remove the capstan belt.



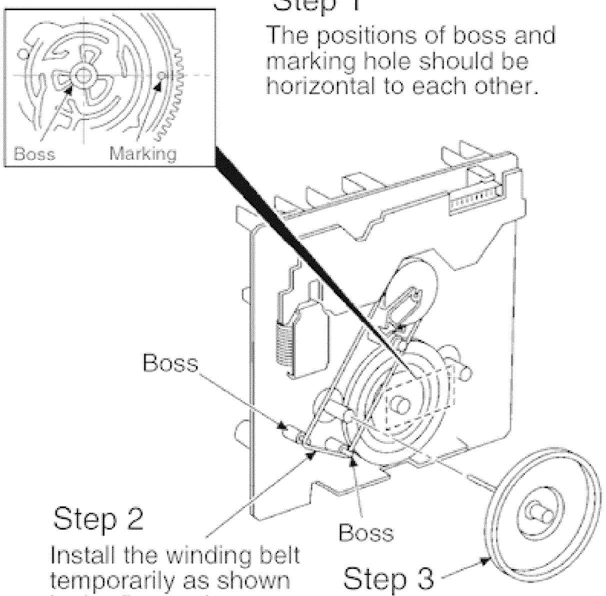
Tape Facing Side
Catch
Winding Belt
(RDV0033-1)

Step 6
Remove the flywheel (R).

Step 7
Release the catch on the tape facing side to remove the winding lever and spring.

Step 8
Remove the flywheel (F).

Installing Belt


Boss
Marking
Boss
Boss

Step 1

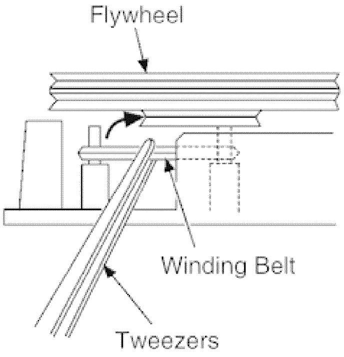
The positions of boss and marking hole should be horizontal to each other.

Step 2

Install the winding belt temporarily as shown in the figure above.

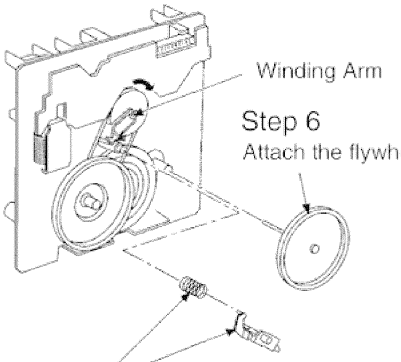
Step 3

Attach the flywheel (F).


Flywheel
Winding Belt
Tweezers

Step 4

Catch the winding belt on the flywheel (F).


Winding Arm

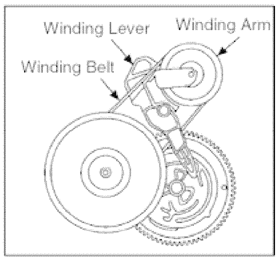
Step 6

Attach the flywheel (R).

Step 5

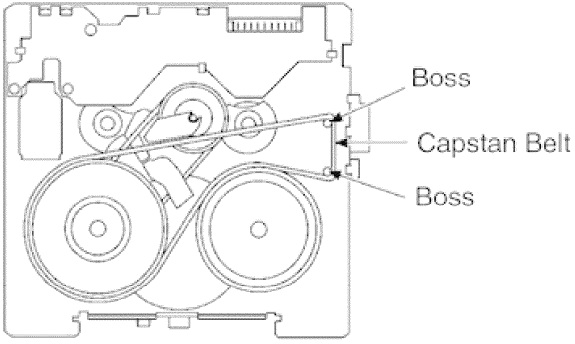
Install the winding lever and spring while the winding arm is pressed to the arrow direction. (Be sure that the winding lever is firmly inserted and the catch is hooked.)

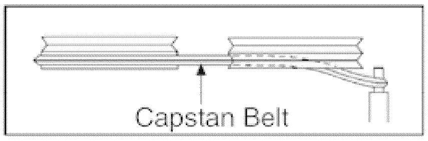
Note:
The winding lever should be positioned as shown in the right figure.


Winding Lever
Winding Arm
Winding Belt

Step 7

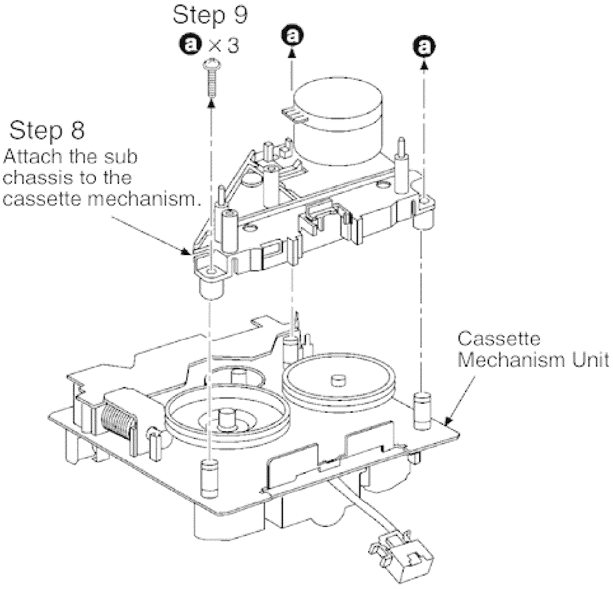
Install the capstan belt temporarily as shown in the figure below.


Boss
Capstan Belt
Boss

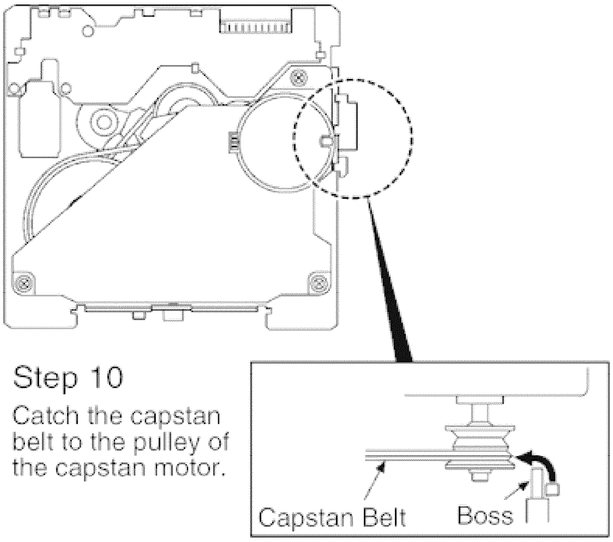

Capstan Belt

Side View

Note:
Keep the belt away from grease.


Step 9
a × 3
a
a
Cassette Mechanism Unit

Step 8
Attach the sub chassis to the cassette mechanism.

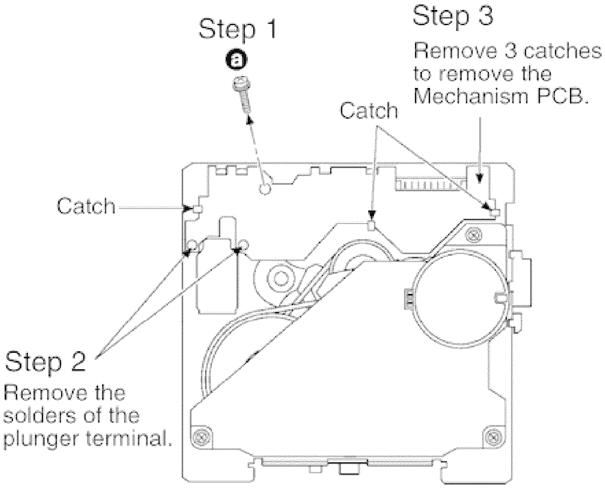

Step 10
Catch the capstan belt to the pulley of the capstan motor.
Capstan Belt
Boss

8.5. Procedure for Replacing Parts on Mechanism PCB

- Follow the (Step 1) - (Step 4) of Item 8.1.1.

- Follow the (Step 1) - (Step 2) of Item 8.1.2.

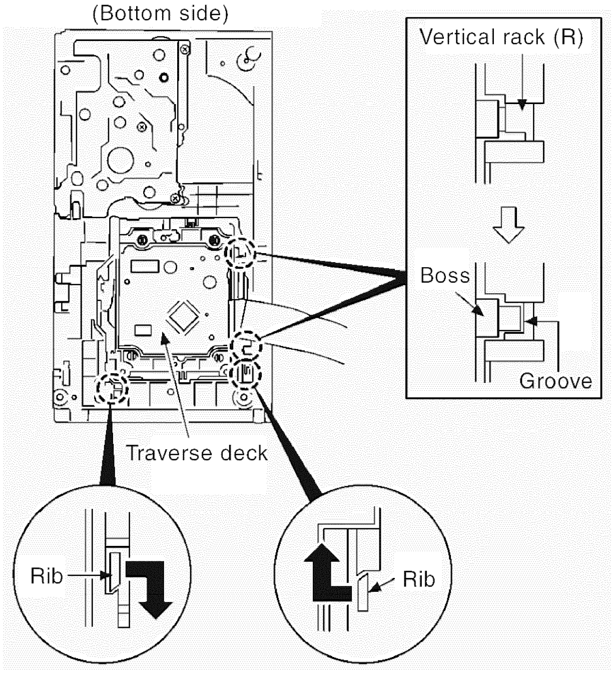
- Follow the (Step 1) - (Step 4) of Item 8.2.


Step 1
a
Step 3
Remove 3 catches to remove the Mechanism PCB.
Catch
Catch
Step 2
Remove the solders of the plunger terminal.

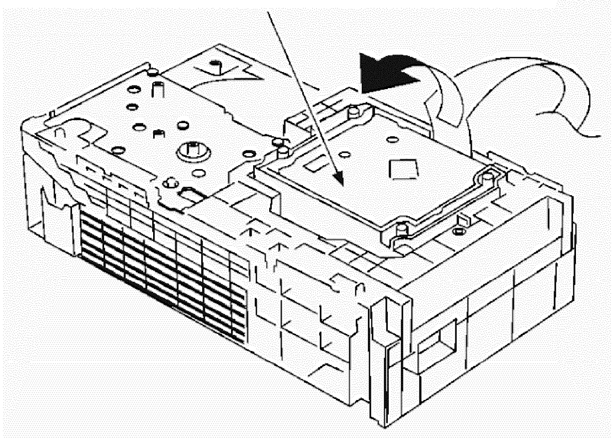
8.6. Replacement of CD traverse deck

- Follow the (Step 1) - (Step 4) of Item 8.1.1.

Step 1
Move ribs at both sides to the arrow direction
(The vertical rack (R) slides and the groove opens)


(Bottom side)
Vertical rack (R)
Boss
Groove
Traverse deck
Rib
Rib

Step 2
Remove CD traverse deck rotating to the arrow direction.

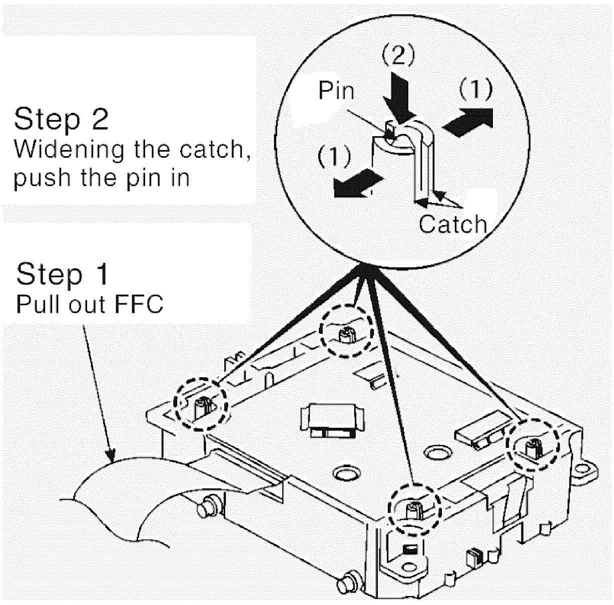


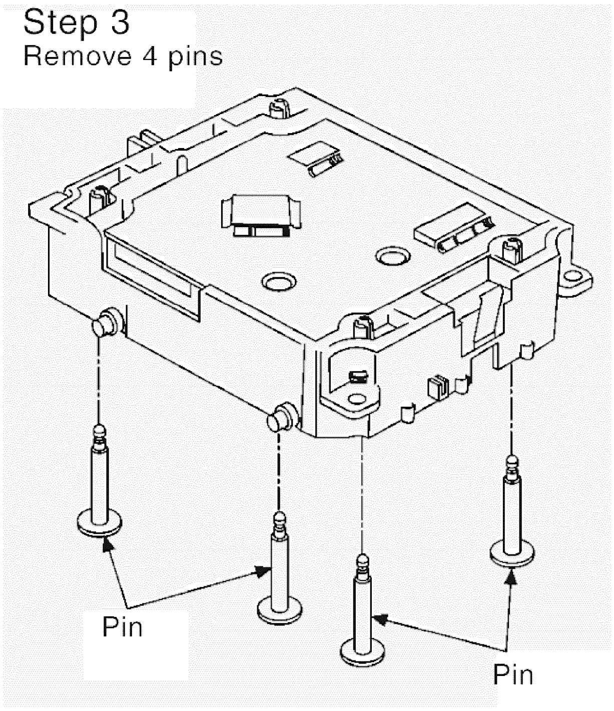
8.7. Replacement of optical pickup unit (CD mechanism)

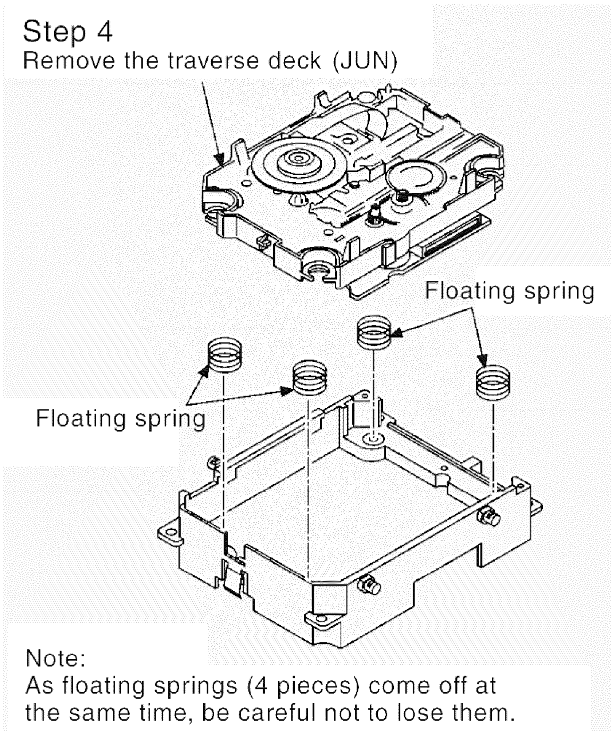
- Follow the (Step 1) - (Step 4) of Item 8.1.1.

- Follow the (Step 1) - (Step 2) of Item 8.1.2.

- Follow the (Step 1) - (Step 2) of Item 8.6.


Step 2
Widening the catch,
push the pin in
(2)
Pin
(1)
(1)
Catch
Step 1
Pull out FFC

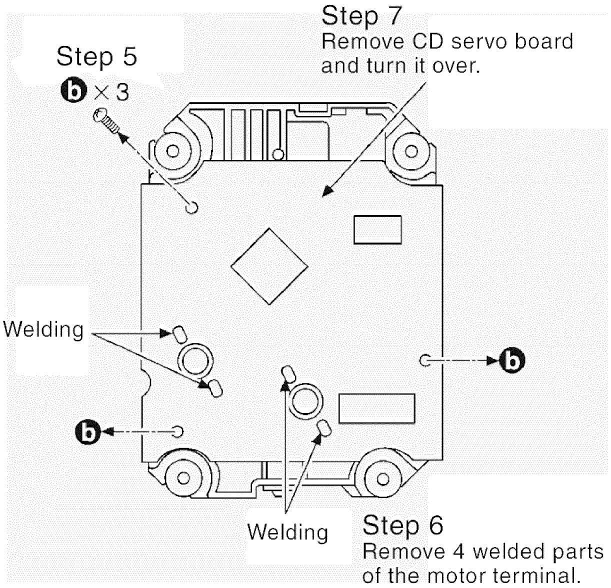

Step 3
Remove 4 pins
Pin
Pin



Step 4
Remove the traverse deck (JUN)

Floating spring
Floating spring

Note:
As floating springs (4 pieces) come off at the same time, be careful not to lose them.



Step 5
ⓑ × 3

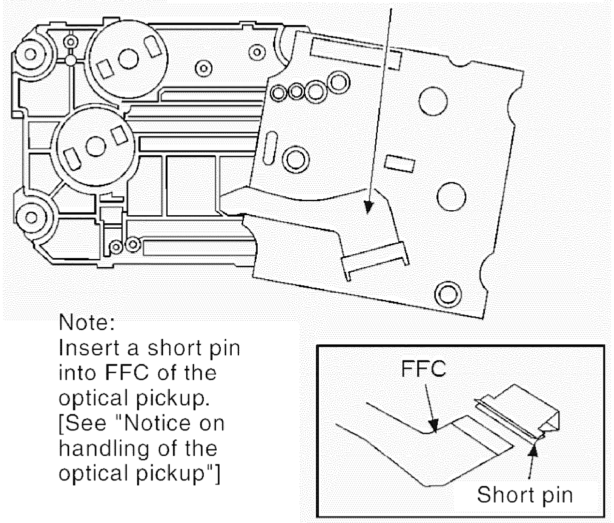
Step 7
Remove CD servo board and turn it over.

Step 6
Remove 4 welded parts of the motor terminal.

Welding
ⓑ
ⓑ
Welding

Step 8

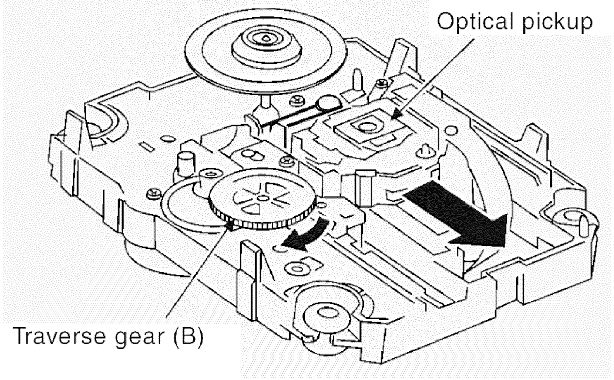
Pull FFC out from the connector.


FFC
Short pin

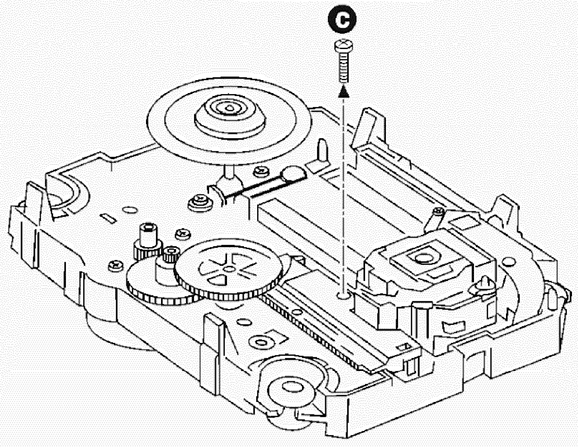
Note:
Insert a short pin into FFC of the optical pickup.
[See "Notice on handling of the optical pickup"]

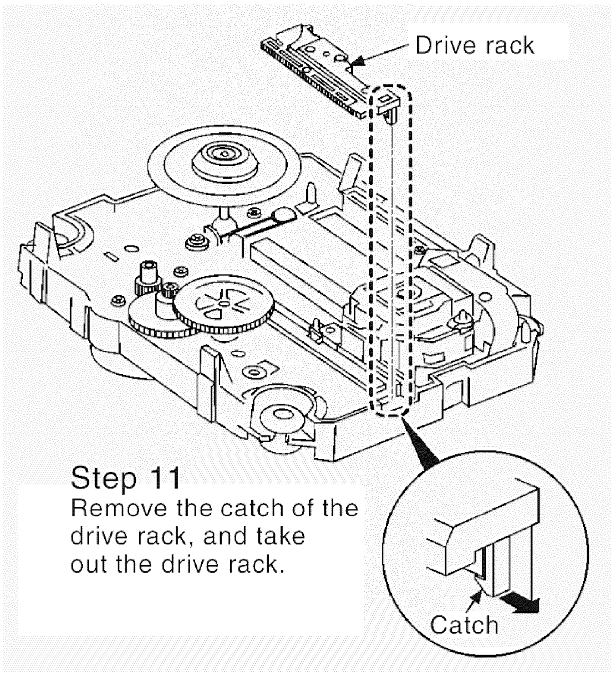
Step 9

Rotate the traverse deck (B) to the arrow direction and shift the optical pickup to the furthest backward.

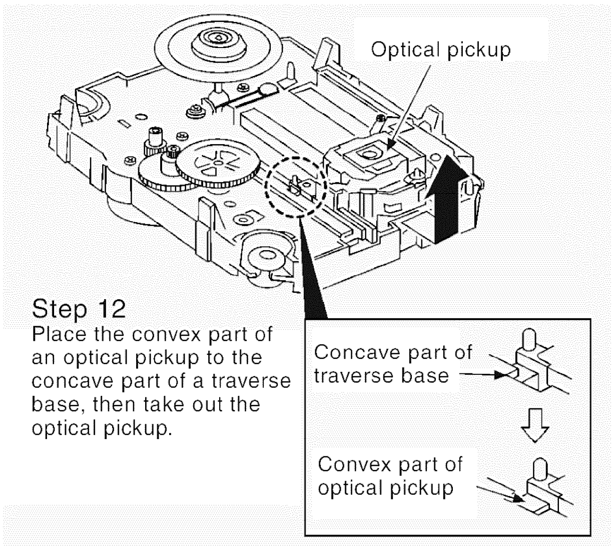

Optical pickup
Traverse gear (B)

Step 10

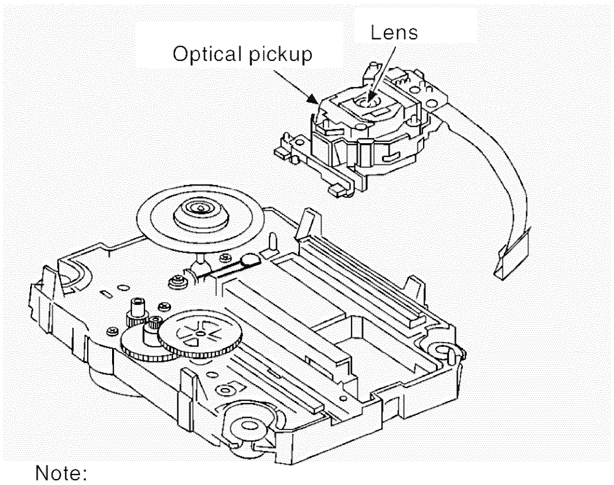



Drive rack
Catch

Step 11
Remove the catch of the drive rack, and take out the drive rack.


Optical pickup
Concave part of traverse base
Convex part of optical pickup

Step 12
Place the convex part of an optical pickup to the concave part of a traverse base, then take out the optical pickup.


Optical pickup
Lens

Note:
Do not touch the lens of the optical pickup

8.8. Replacement of a traverse gear A and a traverse gear B

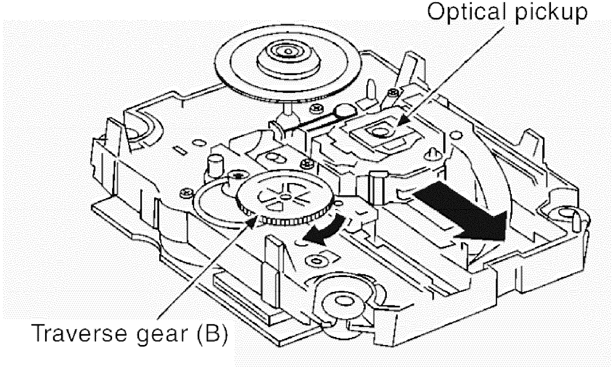
- Follow the (Step 1) - (Step 4) of Item 8.1.1.

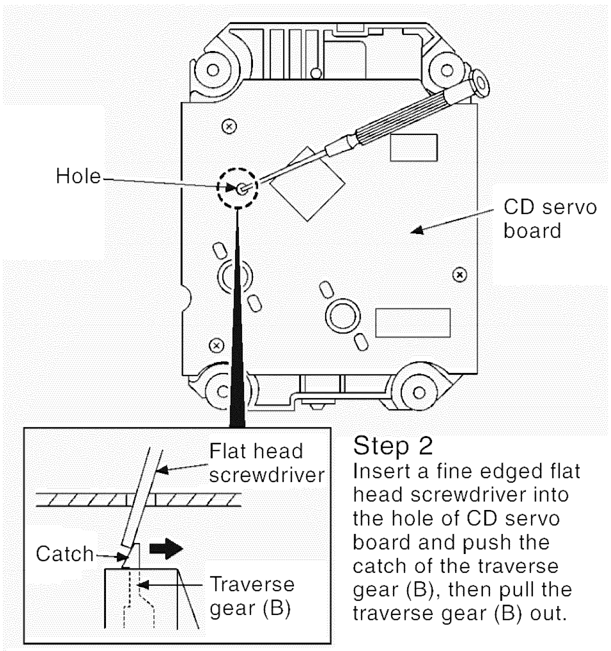
- Follow the (Step 1) - (Step 2) of Item 8.6.

- Follow the (Step 1) - (Step 12) of Item 8.7.

Step 1

Rotate the traverse gear (B) to the arrow direction, and shift the optical pickup to the furthest backward.


Optical pickup
Traverse gear (B)

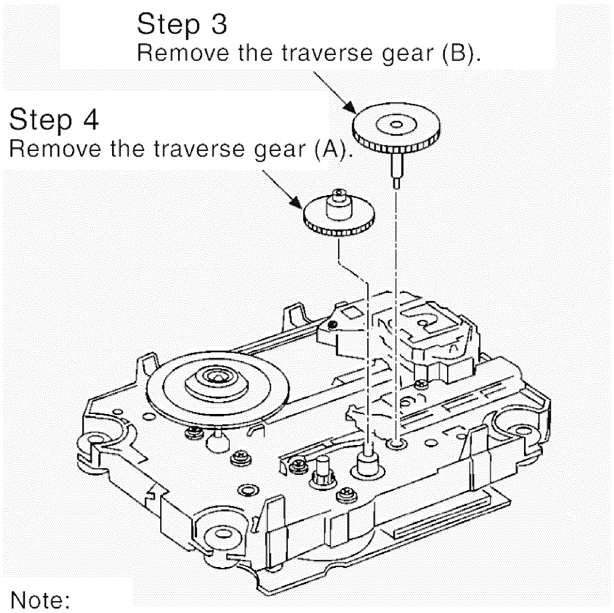

Hole
CD servo board
Flat head screwdriver
Catch
Traverse gear (B)

Step 2

Insert a fine edged flat head screwdriver into the hole of CD servo board and push the catch of the traverse gear (B), then pull the traverse gear (B) out.

Note:

Be careful not to break the hook of the traverse gear (B)



Step 3
Remove the traverse gear (B).

Step 4
Remove the traverse gear (A).

Note:
Do not use the removed traverse gear (B) anymore.
Surely replace with a new one.

8.9. Procedure for removing CD loading mechanism

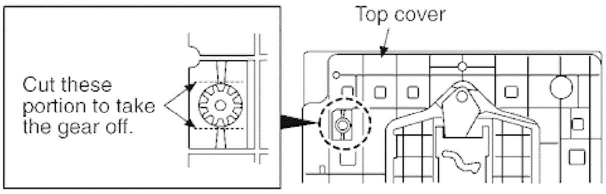
1. Turn off by pressing power SW in the body.
2. Pull out AC plug after the indication of [GOOD-BYE], then disassemble the body.
3. Disassemble the body, and take out CD loading mechanism.
4. Perform disassembly according to the following procedure for disassembly.

8.10. CR16 mechanism disassembly procedure

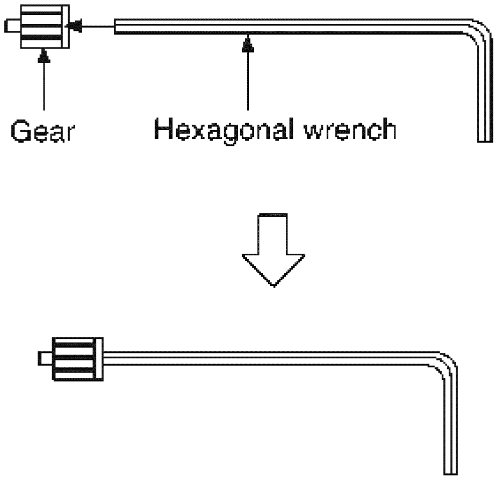
8.10.1. Gear for servicing (as jig) information

- This unit has a gear which used for checking items (open/close of disc tray, up/down operation of traverse unit by manually) when servicing. (For gear information, that is described on the items for disassembly procedures.)
- For preparation of gear (for servicing), perform the procedures as follows.
- In case of re-servicing the same set, the “gear for servicing” may be took off because it had been used. So, the “gear for servicing” must be stored.

1. Remove the gear attached to top cover of CD loading mechanism.


Top cover
Cut these
portion to take
the gear off.

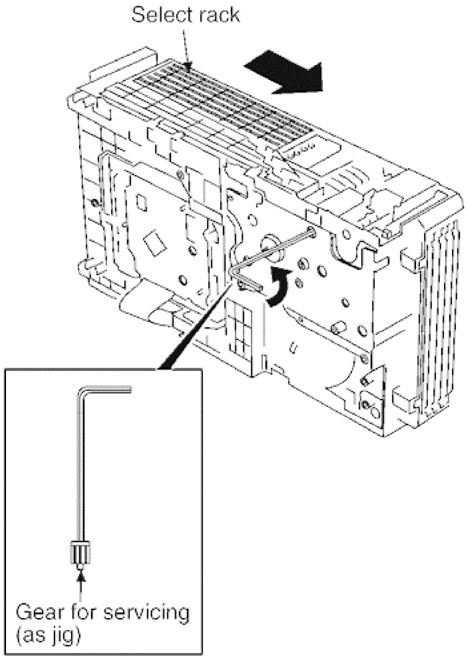
2. Insert the hexagonal wrench (2.5mm) into the gear.


Gear
Hexagonal wrench

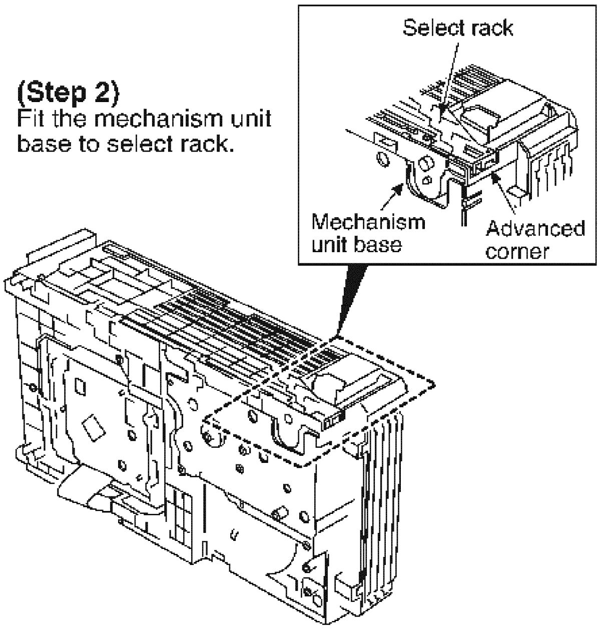
(Preparation of gear as jig is complated.)

8.10.2. Replacement for the disc tray

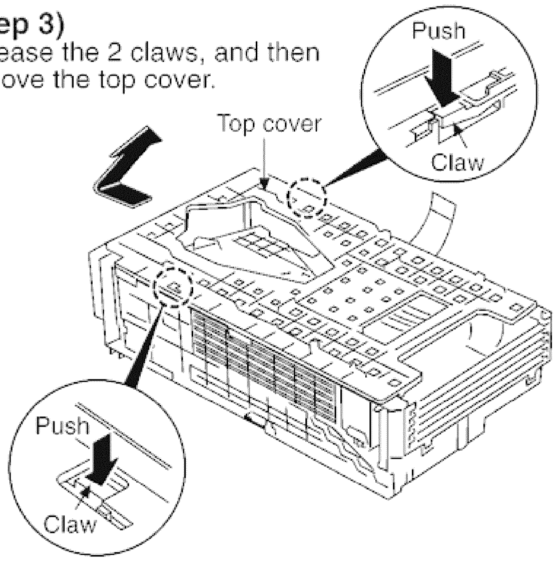
(Step 1)
Rotate the gear for servicing and move the select rack to advanced corner.


Select rack
Gear for servicing
(as jig)

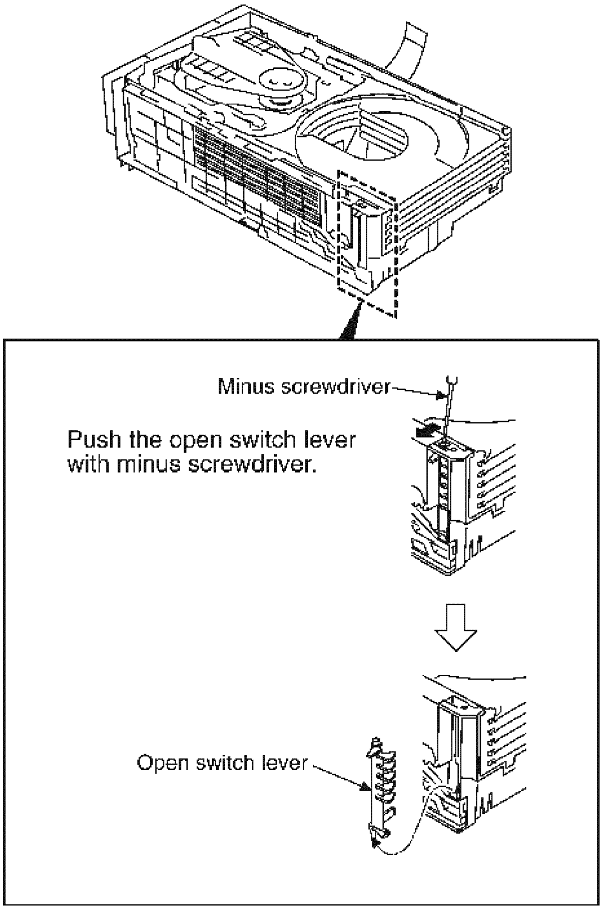
(Step 2)
Fit the mechanism unit base to select rack.


Select rack
Mechanism unit base
Advanced corner

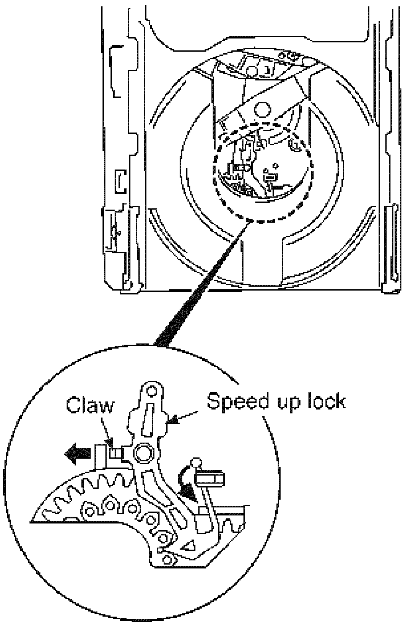
(Step 3)
Release the 2 claws, and then remove the top cover.


Push
Claw
Top cover
Push
Claw

(Step 4)
Remove the open switch lever.

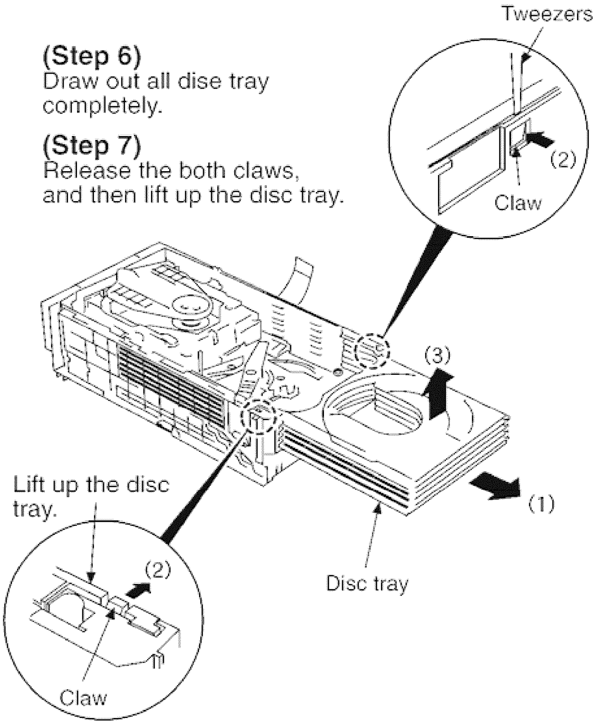

Minus screwdriver
Push the open switch lever with minus screwdriver.
Open switch lever

(Step 5)
Release the claw, and then remove the speed up lock.


Claw
Speed up lock

(Step 6)
Draw out all dise tray completely.

(Step 7)
Release the both claws, and then lift up the disc tray.

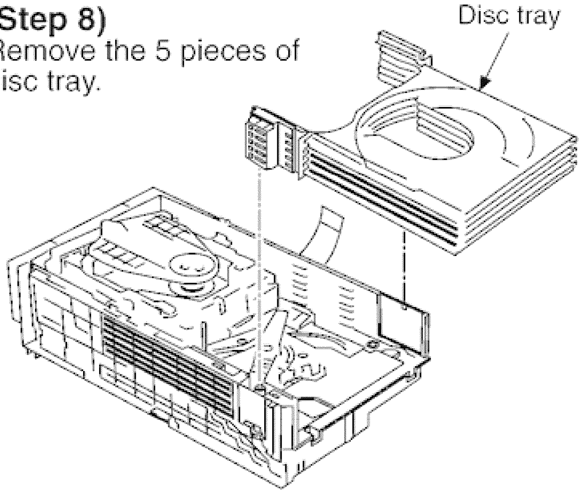


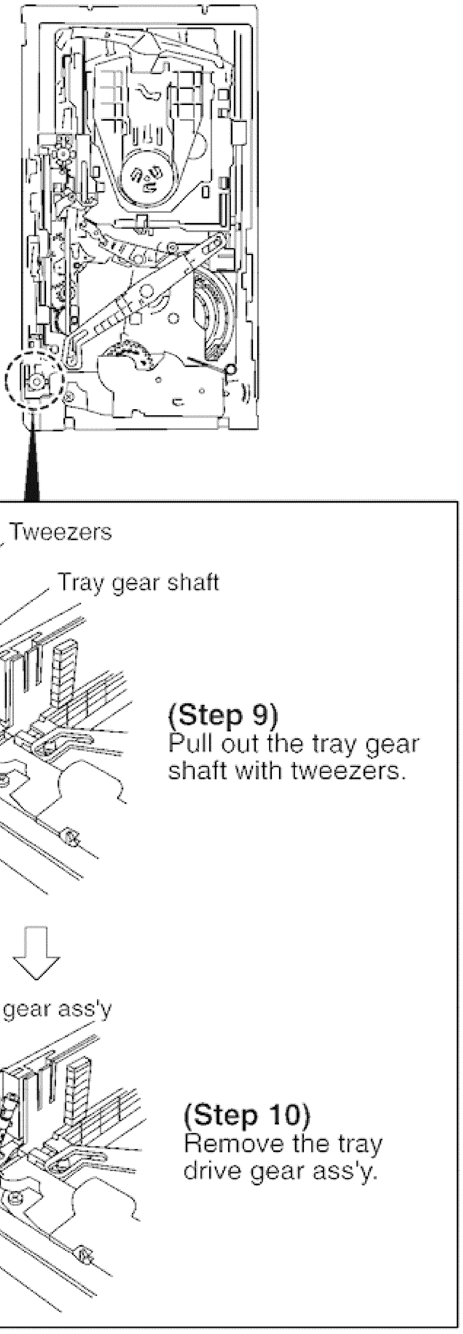
Insert the tweezers between the mechanism base and disc tray, and then lift up the disc tray.

Lift up the disc tray.

Tweezers
(2)
Claw
(3)
(1)
Disc tray
(2)
Claw

(Step 8)
Remove the 5 pieces of disc tray.




Tweezers
Tray gear shaft
Tray drive gear ass'y

(Step 9)
Pull out the tray gear shaft with tweezers.

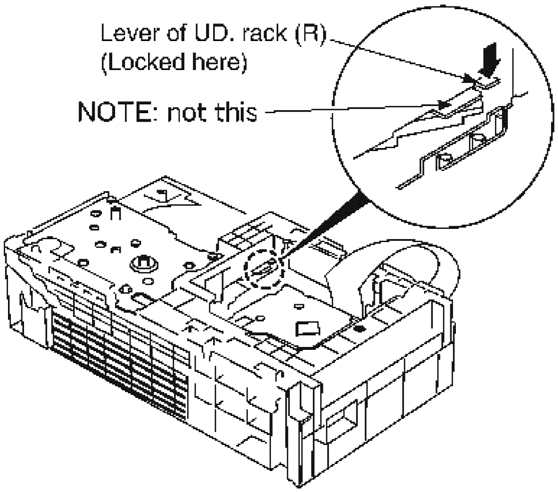
(Step 10)
Remove the tray drive gear ass'y.

8.10.3. Replacement for the traverse deck

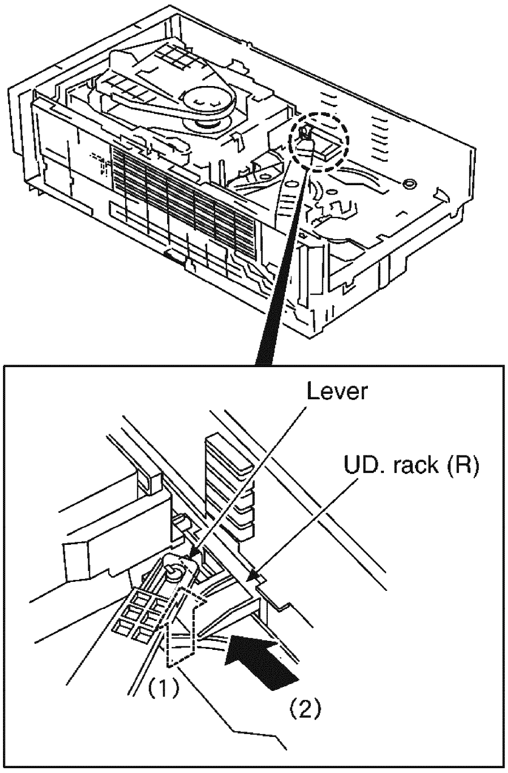
- Follow the (Step 1) - (Step 10) of item 8.10.2.

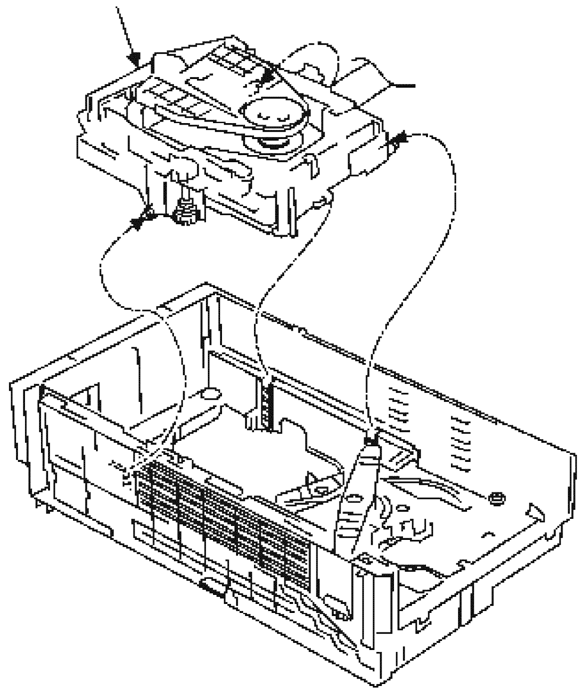
(Step 1)
Confirm the position for lever of UD. rack (R) to remove traverse unit.

(Step 2)
Turn the unit over. (Upside: P.C.B.)


Lever of UD. rack (R)
(Locked here)
NOTE: not this

(Step 3)
Turn the unit over again, slide UD. rack (R) while pushing up the lever from the bottom.


Lever
UD. rack (R)
(1)
(2)

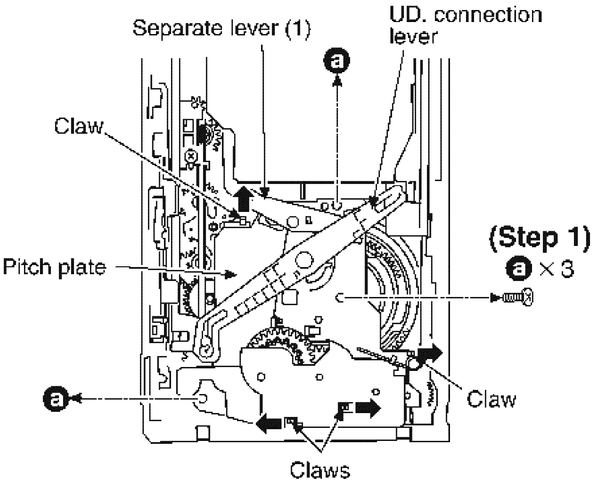


(Step 4)
Remove the traverse unit.

8.10.4. Disassembly for CD loading unit

- Follow the (Step 1) - (Step 10) of item 8.10.2.

- Follow the (Step 1) - (Step 4) of item 8.10.3.

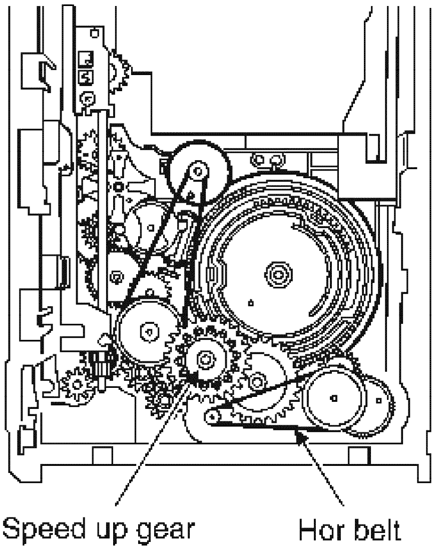

Separate lever (1)
UD. connection lever
a
Claw
Pitch plate
a
Claw
Claws

(Step 1)
a × 3

(Step 2)
Release the 4 claws, and then remove the pitch plate together with separate lever (1) and UD. connection lever.

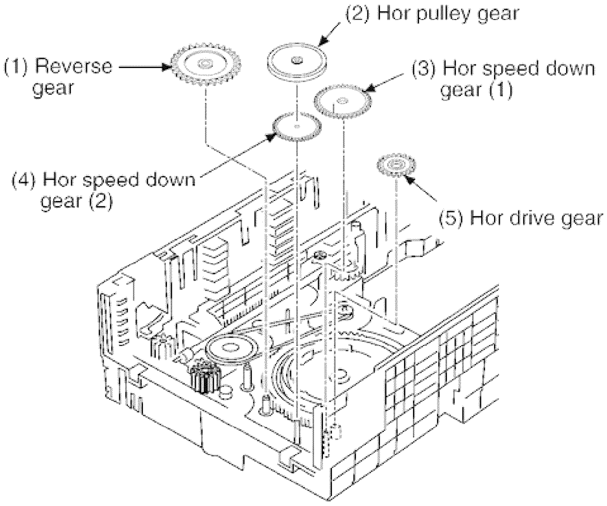
(Step 3)

Remove the speed up gear and hor belt.


Speed up gear
Hor belt

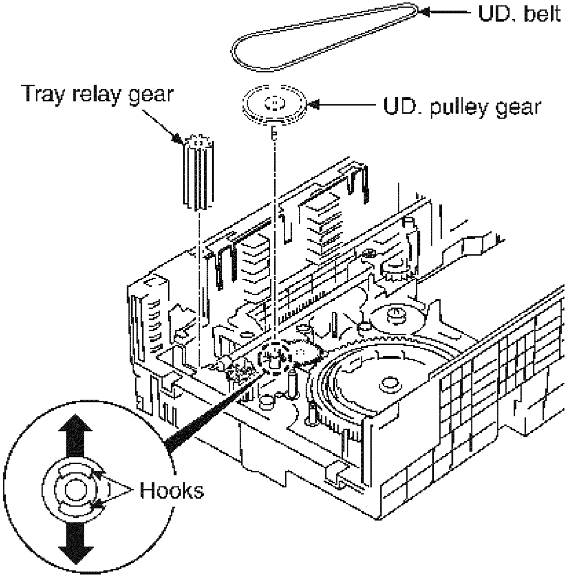
(Step 4)

Remove the reverse gear, hor pulley gear, hor speed down gear (1), hor speed down gear (2) and hor drive gear.


(2) Hor pulley gear
(1) Reverse gear
(3) Hor speed down gear (1)
(4) Hor speed down gear (2)
(5) Hor drive gear

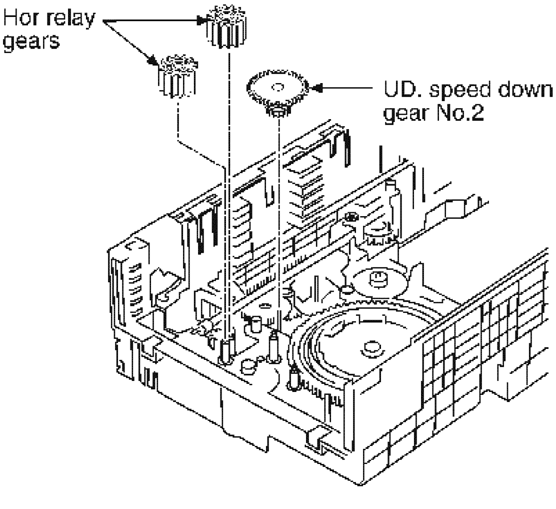
(Step 5)
Remove the UD. belt and tray relay gear.

(Step 6)
Pull out the UD. pulley gear, loosen 2 hooks of the bottom of mechanism bese.

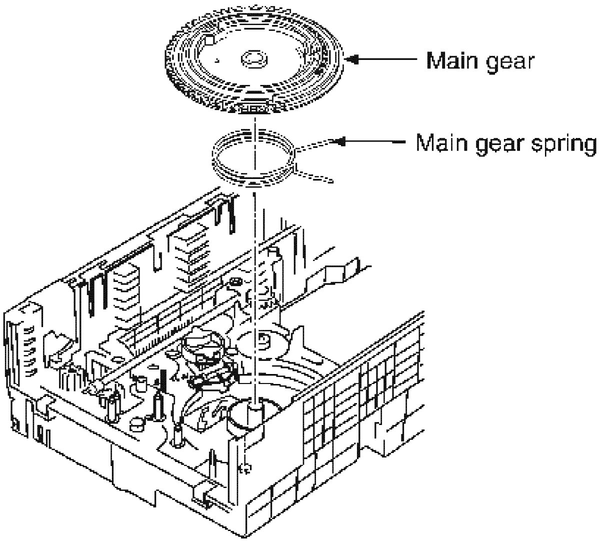

UD. belt
Tray relay gear
UD. pulley gear
Hooks

(Bottom side)

(Step 7)
Remove the 2 hor relay gears and UD. speed down gear No.2.

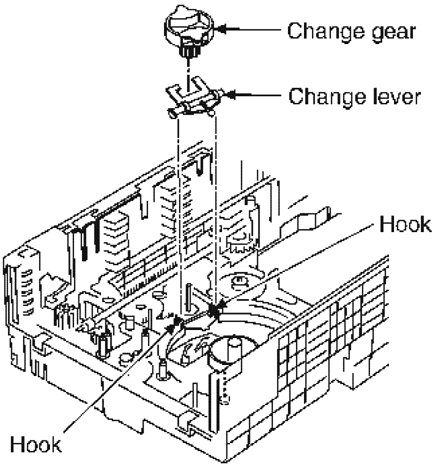

Hor relay gears
UD. speed down gear No.2

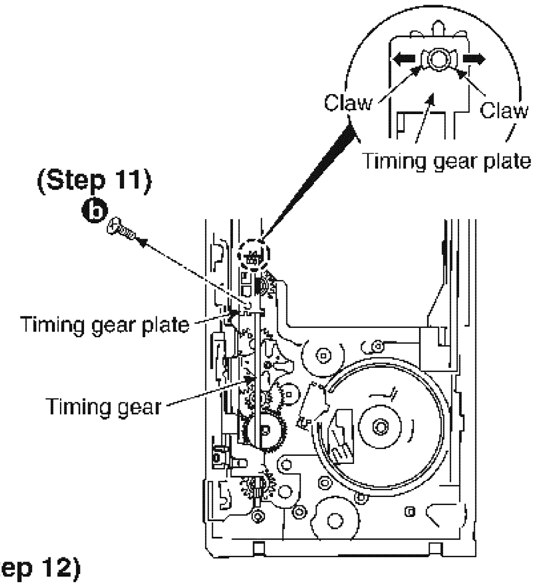
(Step 8)
Remove the main gear and main gear spring.


Main gear
Main gear spring

(Step 9)
Remove the change gear.

(Step 10)
Raise the change lever upright, and pull it out of hook.

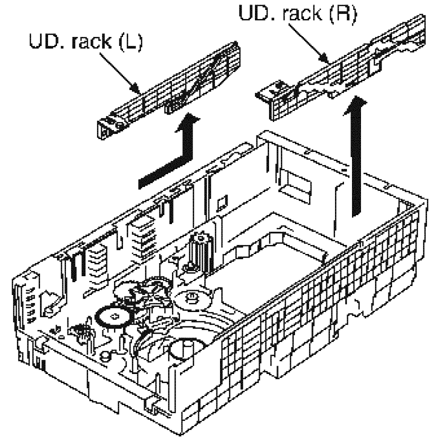

Change gear
Change lever
Hook
Hook


(Step 11)
b
Claw
Claw
Timing gear plate
Timing gear plate
Timing gear

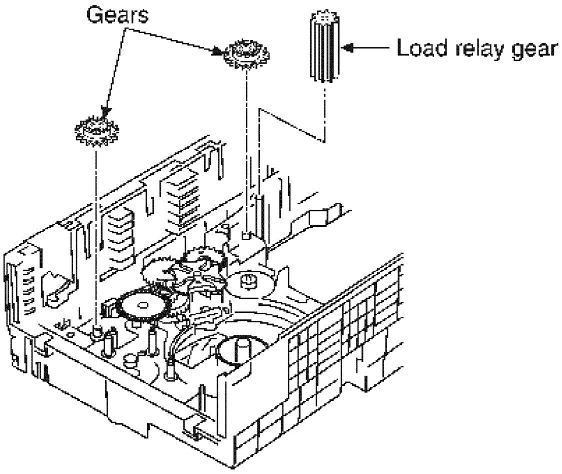
(Step 12)
Release the 2 claws, and then remove the timing gear and timing gear plate.

(Step 13)
Move the UD. rack (L) to backward, and then remove it.

(Step 14)
Remove the UD. rack (R).

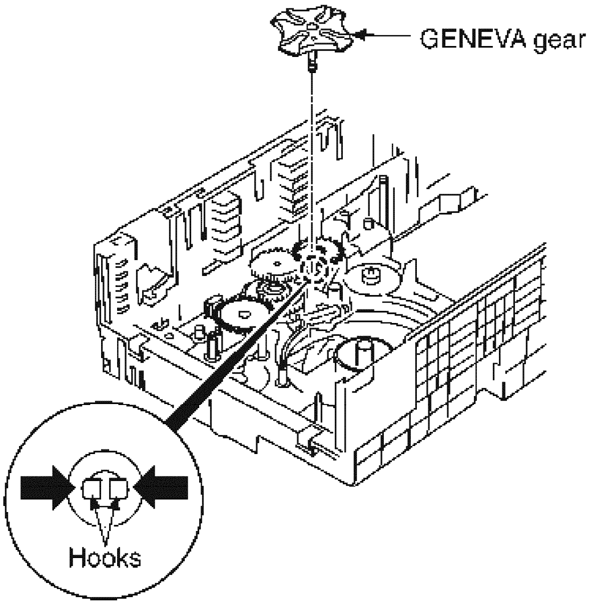

UD. rack (R)
UD. rack (L)

(Step 15)
Remove the 2 gears and load relay gear.


Gears
Load relay gear

(Step 16)

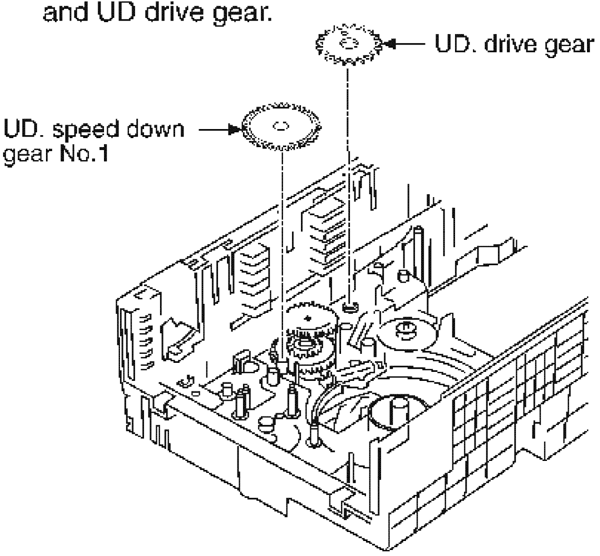
Pull out the GENEVA gear, loosen 2 hooks of the bottom of mechanism base.


GENEVA gear
Hooks

(Bottom side)

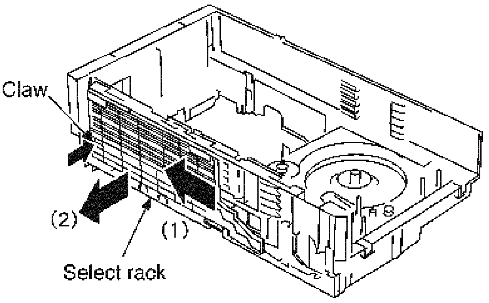
(Step 17)

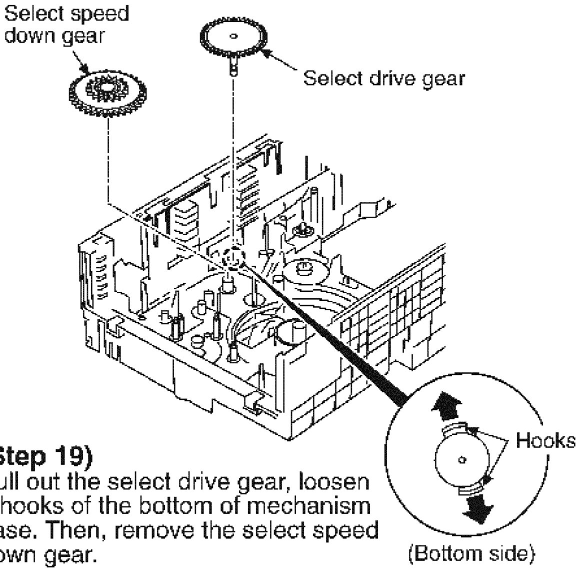
Remove the UD. speed down gear No.1 and UD drive gear.


UD. drive gear
UD. speed down gear No.1

(Step 18)

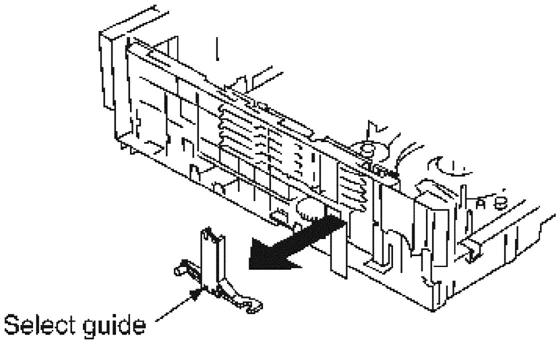
Slide the select rack to the edge direction of the arrow (1). Push the claw and pull out to arrow (2) while sliding the select rack to the arrow (1).


Claw
(2)
(1)
Select rack

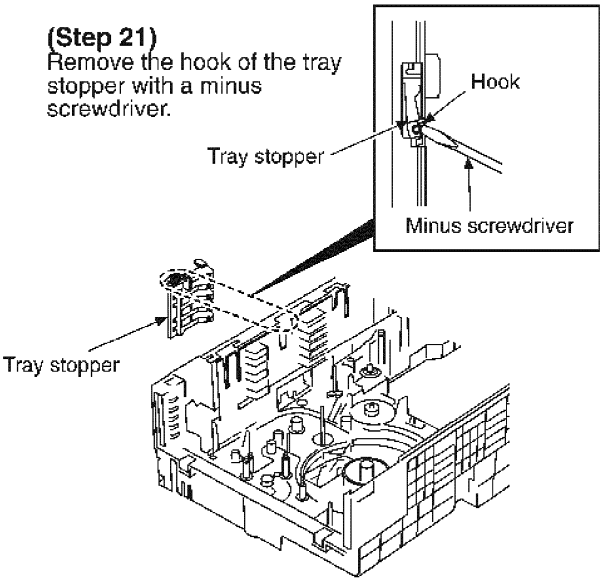

Select speed down gear
Select drive gear
Hooks
(Bottom side)

(Step 19)
Pull out the select drive gear, loosen 2 hooks of the bottom of mechanism base. Then, remove the select speed down gear.

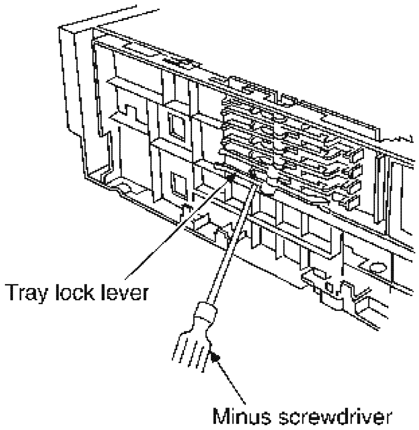
(Step 20)
Remove the select guide after sliding upside.


Select guide

(Step 21)
Remove the hook of the tray stopper with a minus screwdriver.


Hook
Tray stopper
Minus screwdriver
Tray stopper

(Step 22)
Remove the bottom of the tray lock lever with a minus screwdriver and others.

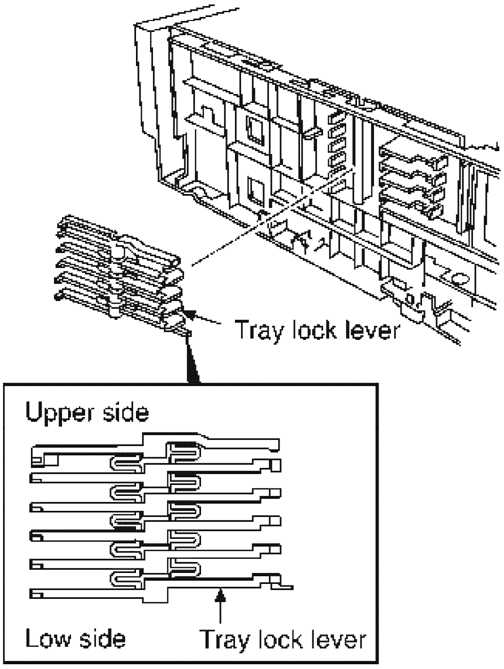

Tray lock lever
Minus screwdriver

8.11. CR16 MECHANISM ASSEMBLY PROCEDURE

The following specified greases and/or oil must be applied when some specific parts are changed.

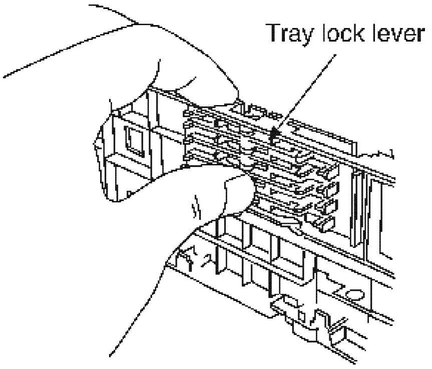
1. **Floil grease (VFK1298) : The floil grease must be applied to tray, tray (L) and tray (R).**
2. **Hanarl oil (VFK1700) : The hanarl oil must be applied to any parts with grease other than the said parts.**

(Step 1)
Install the tray lock lever to mechanism base.


Tray lock lever
Upper side
Low side
Tray lock lever

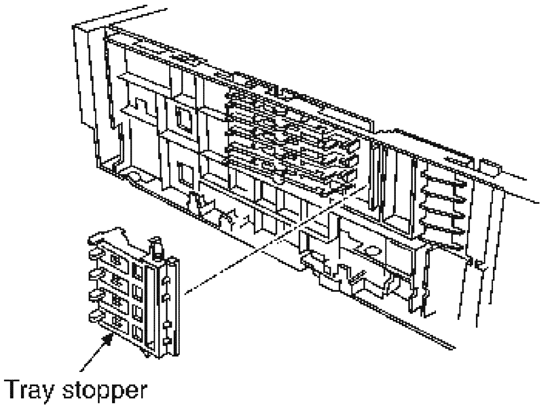
(Step 2)

Push the tray lock lever with a hand and install it.


Tray lock lever

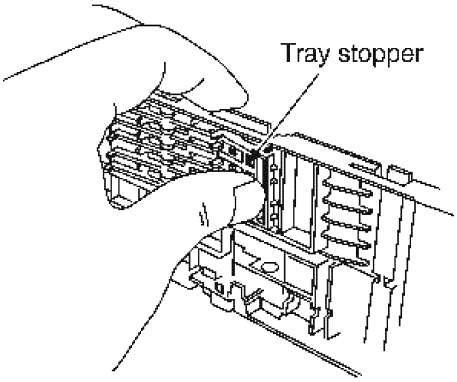
(Step 3)

Install the tray stopper to mechanism bese.


Tray stopper

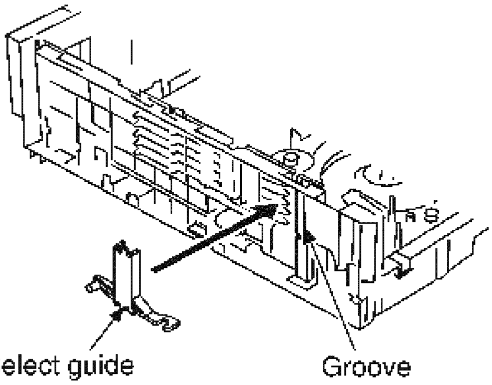
(Step 4)

Push the tray stopper with a hand and install it.


Tray stopper

(Step 5)

Insert the select guide with a groove of the mechanism base and move it below.

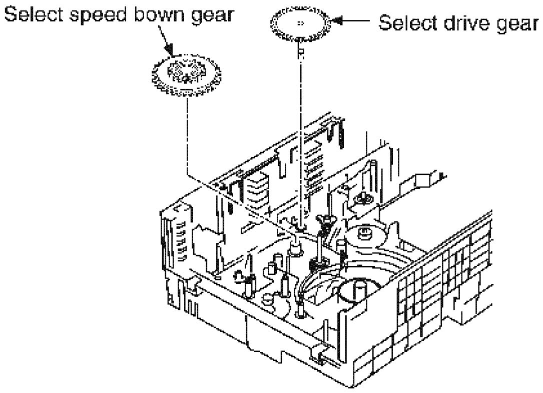

Select guide
Groove

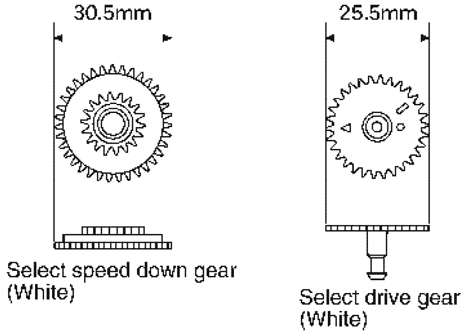
(Step 6)

Install the select speed down gear to mechanism base.

(Step 7)

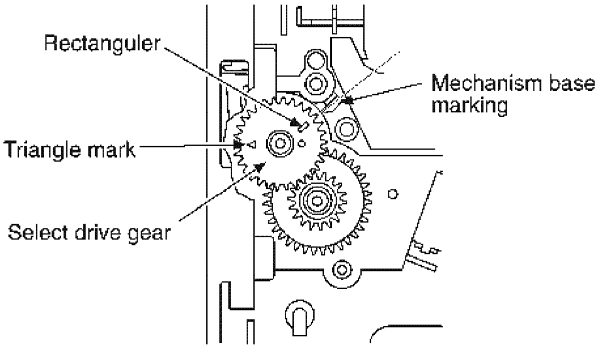
Install the select drive gear to mechanism base.


Select speed bown gear
Select drive gear


30.5mm
25.5mm
Select speed down gear
(White)
Select drive gear
(White)

(Step 8)

Fit a mechanism base marking to the rectanguler mark of gear so that the triangle mark can indicate the sideward direction.

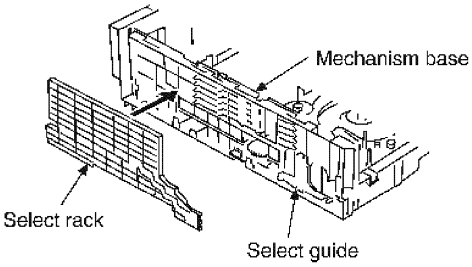

Rectanguler
Triangle mark
Select drive gear
Mechanism base marking

(Step 9)

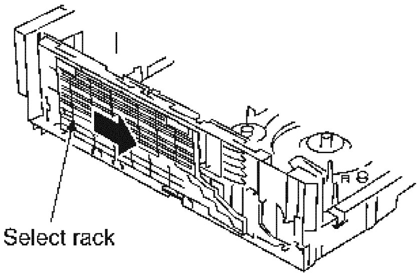
Install the select rack to mechanism base.

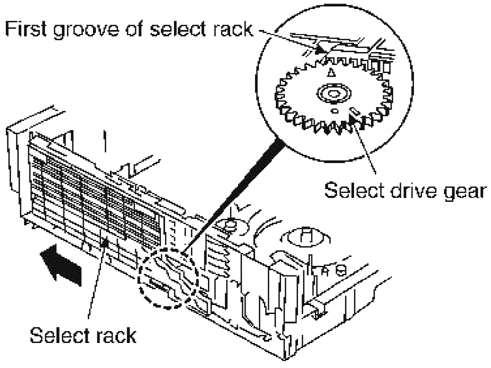
(Checking items before the installation.
1. Check select guide is completely in lowest position.
2. Check its phase of select drive gear is correct position.(Rectangle/Trianguler mark)(Refer to Step 8))

1. Put a select rack down with it fitted to its circumference of mechanism base.


Mechanism base
Select rack
Select guide

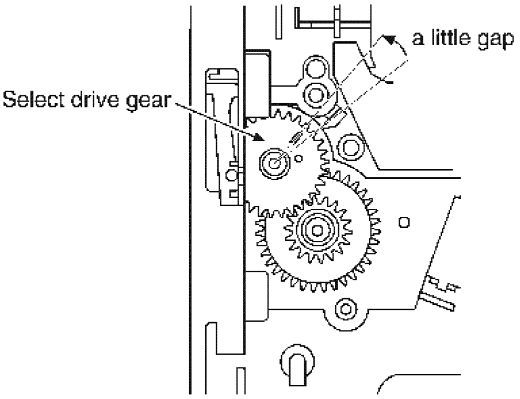
2. Slide the select rack with it's pushing to a little right direction and install it.


Select rack

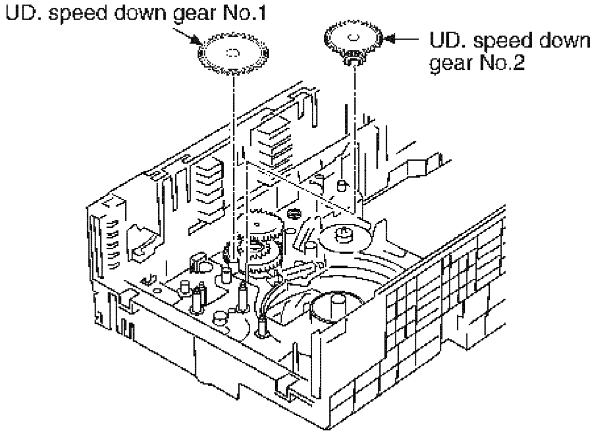

(Figure to see from the inside)
First groove of select rack
Select drive gear
Select rack

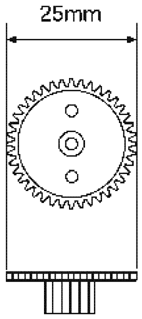
3. Check whether its end of triangular mark is in first groove of select rack, after fixing.
4. After insertion of select rack, continue the following work until the indication that it gose forward. And, all the while it must be checked that select rack is in the extreme end.

5. After insertion the select rack, the marking of select gear has a little gap when it is in the extreme end.

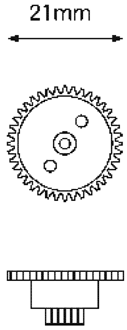

a little gap
Select drive gear

(Step 10)
Install the UD. speed down gear No.1 and UD. speed down gear No.2.


UD. speed down gear No.1
UD. speed down gear No.2

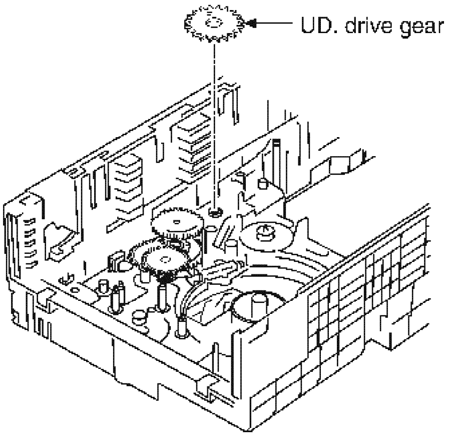


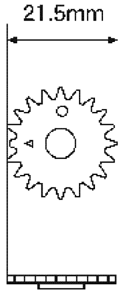
UD. speed down gear No.1
(White)



UD. speed down gear No.2
(Semi-transparent)

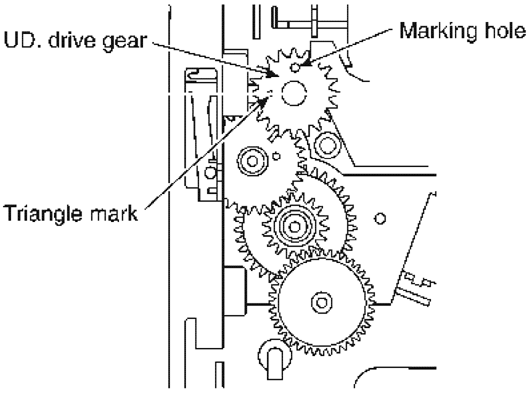
(Step 11)
Install the UD. drive gear to mechanism base.


UD. drive gear

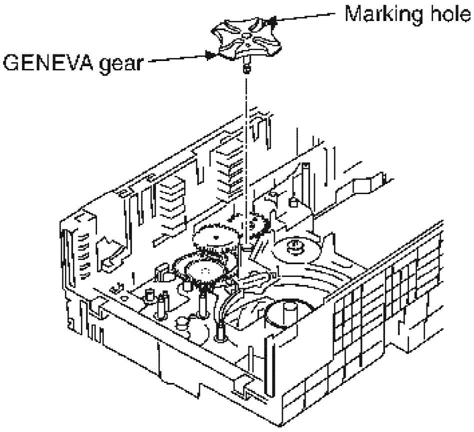


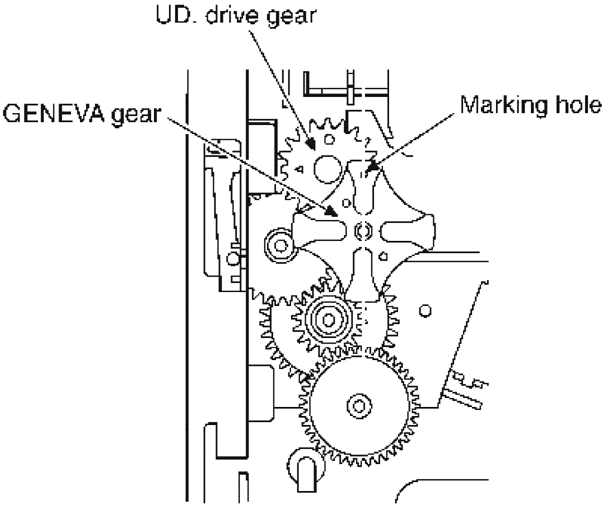
UD drive gear
(White)

(Step 12)
Insert the UD. drive gear with its marking hole upward.
At that time, its triangle mark should be sideways.

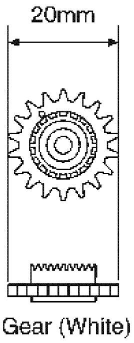

UD. drive gear
Marking hole
Triangle mark

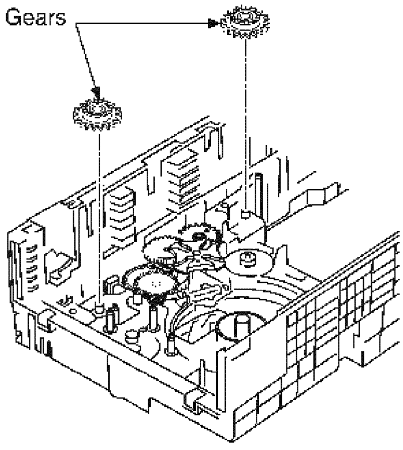
(Step 13)
Insert the GENEVA gear with its marking hole upward, and fix it by 2 hooks on bottom of mechanism base.
At that time, UD. drive gear mustn't be moved.


Marking hole
GENEVA gear

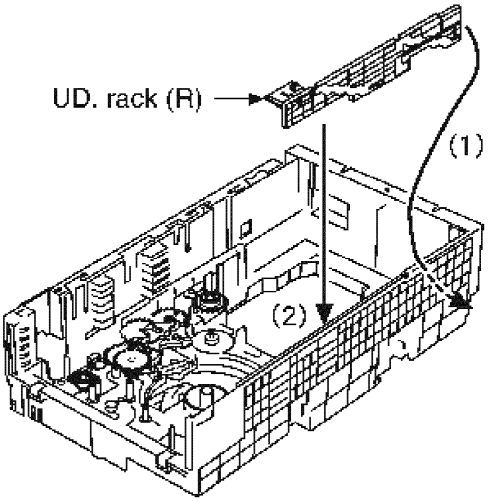

UD. drive gear
GENEVA gear
Marking hole

(Step 14)
Install the 2 gears to mechanism base.

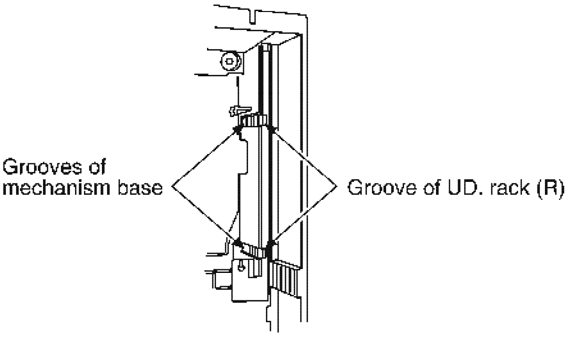

20mm
Gear (White)

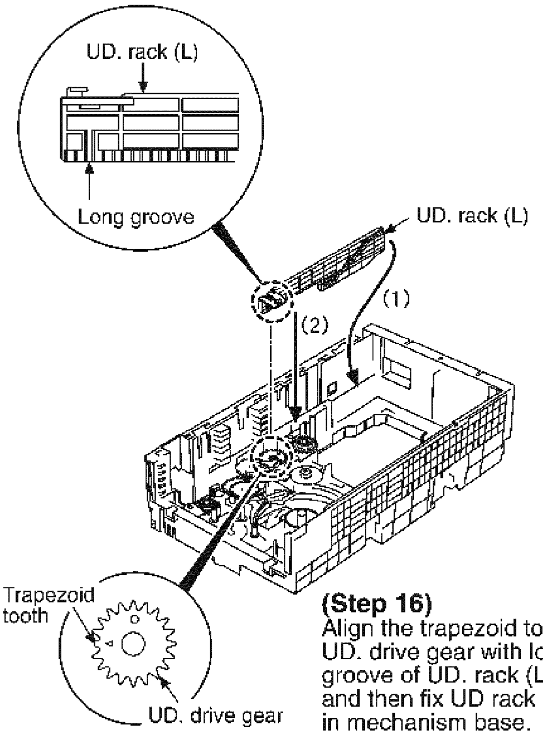


(Step 15)
Insert the UD. rack (R) to (2) from arrow (1).



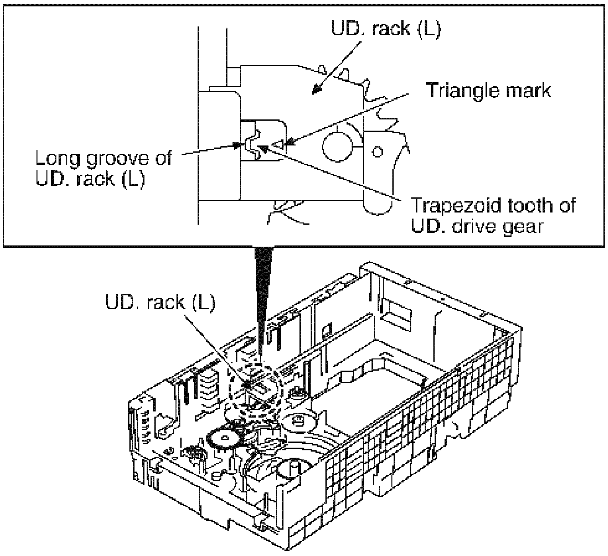
NOTE:
Put a groove of the mechanism base to the UD. rack (R).


Grooves of
mechanism base
Groove of UD. rack (R)


UD. rack (L)
Long groove
UD. rack (L)
(1)
(2)
Trapezoid tooth
UD. drive gear

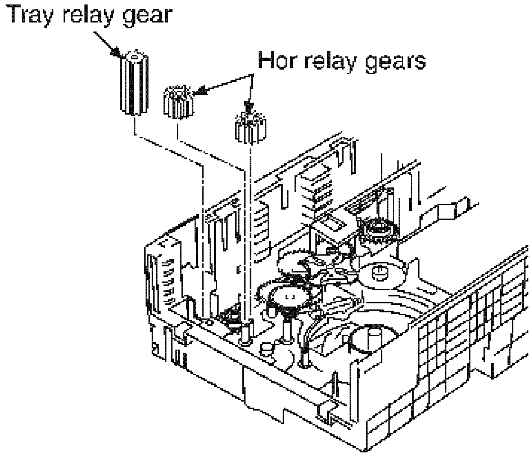
(Step 16)
Align the trapezoid tooth of UD. drive gear with long groove of UD. rack (L), and then fix UD rack (L) in mechanism base.

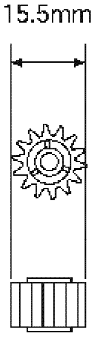
(Figure to see from the upper side)


UD. rack (L)
Triangle mark
Long groove of UD. rack (L)
Trapezoid tooth of UD. drive gear
UD. rack (L)

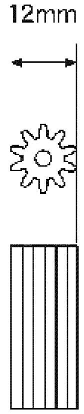
(Step 17)

Install the tray relay gear and 2 hor relay gears.


Tray relay gear
Hor relay gears

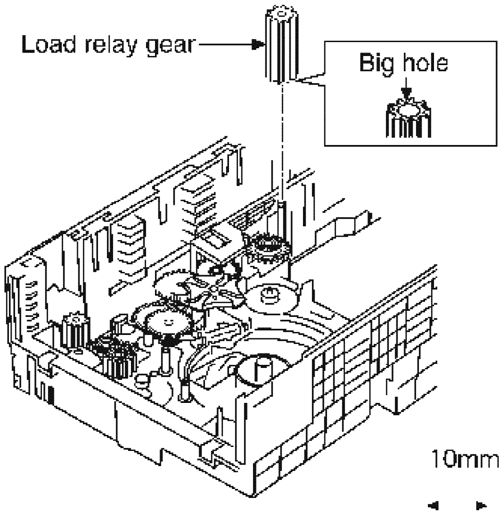


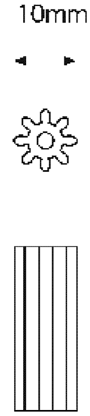
Hor relay gears (White)



Tray relay gear (White)

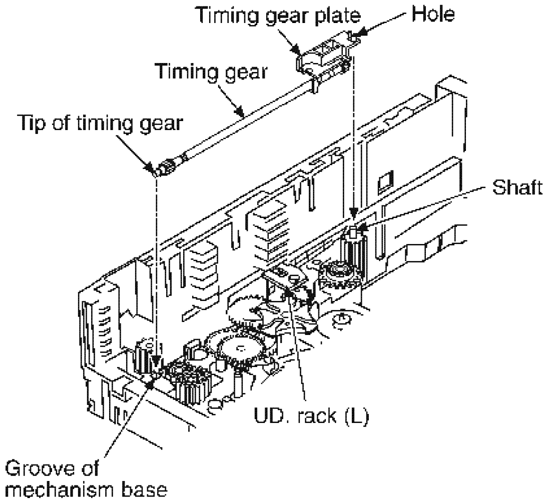
(Step 18)
Install the load relay gear to mechanism base.
(Fit load relay gear with its big hole downward.)


Load relay gear
Big hole



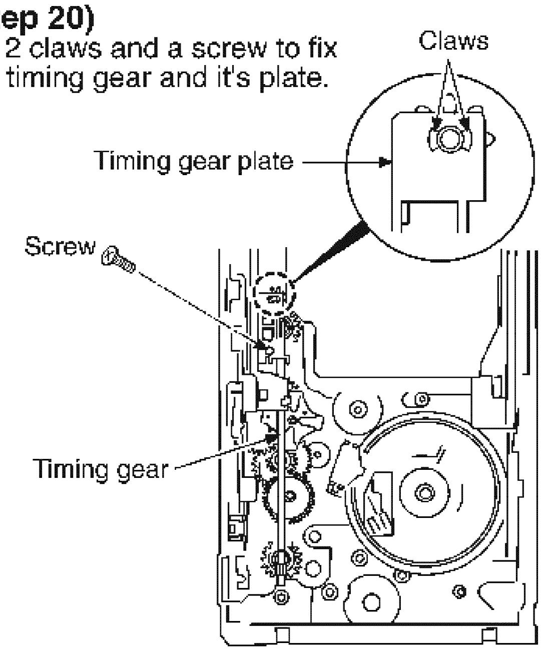
Load relay gear
(White)

(Step 19)
Put on the top of the timing gear, then, install the timing gear and it's plate.
At that time avoid the UD. rack (L).


Timing gear plate
Hole
Timing gear
Tip of timing gear
Shaft
UD. rack (L)
Groove of
mechanism base

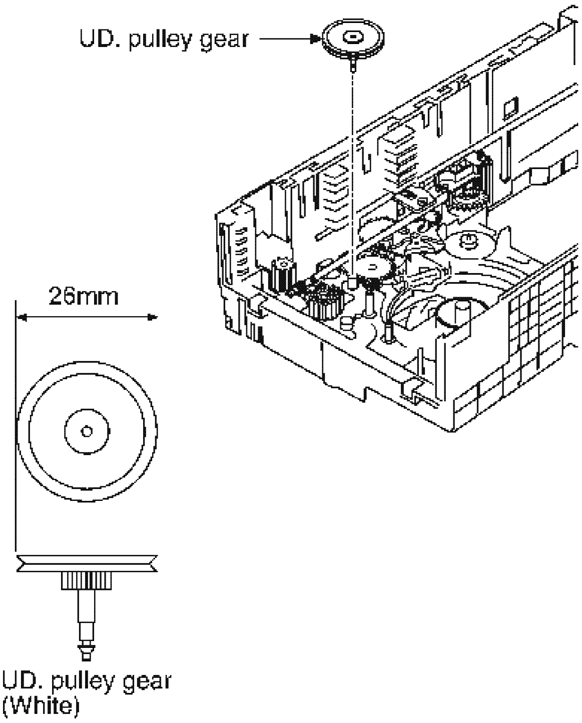
(Step 20)

Fix 2 claws and a screw to fix the timing gear and it's plate.


Claws
Timing gear plate
Screw
Timing gear

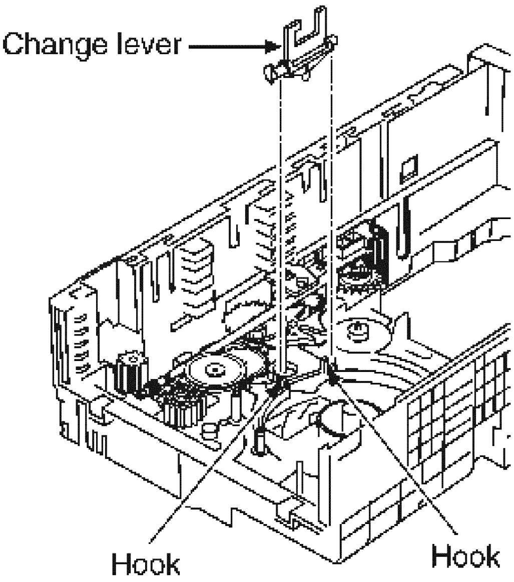
(Step 21)

Install the UD. pulley gear to mechanism base.


UD. pulley gear
26mm
UD. pulley gear
(White)

(Step 22)

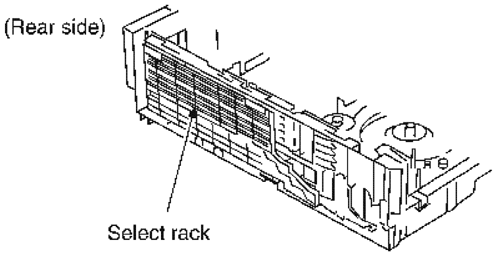
Insert the change lever with it upright.

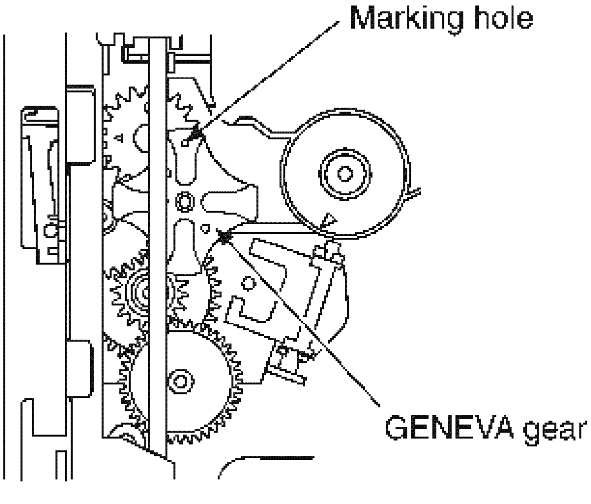

Change lever
Hook
Hook

(Step 23)

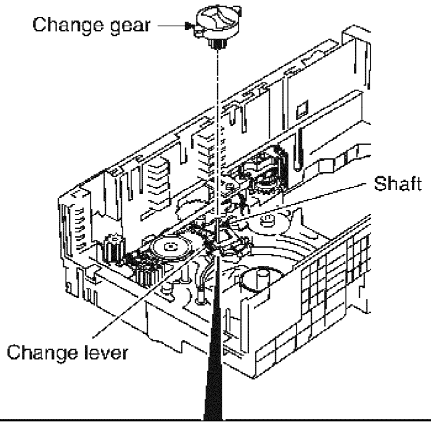
Be sure the notice of bellow before fixing the change gear.

1. Select track should be in the rear of mechanism base.
2. Its hole of GENEVA gear should turn up.

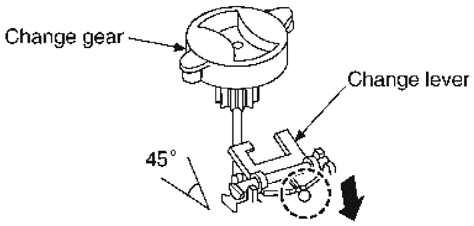

(Rear side)
Select rack


Marking hole
GENEVA gear

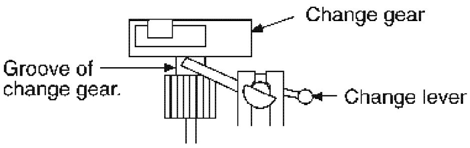
(Step 24)
Install the change gear as insert the change lever into the groove of change gear.


Change gear
Shaft
Change lever

1. Pushing the ○ part and pull up the change lever 45°.

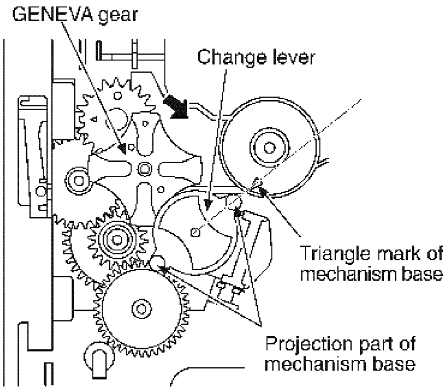

Change gear
Change lever
45°

2. Insert the change lever into the groove of change gear.

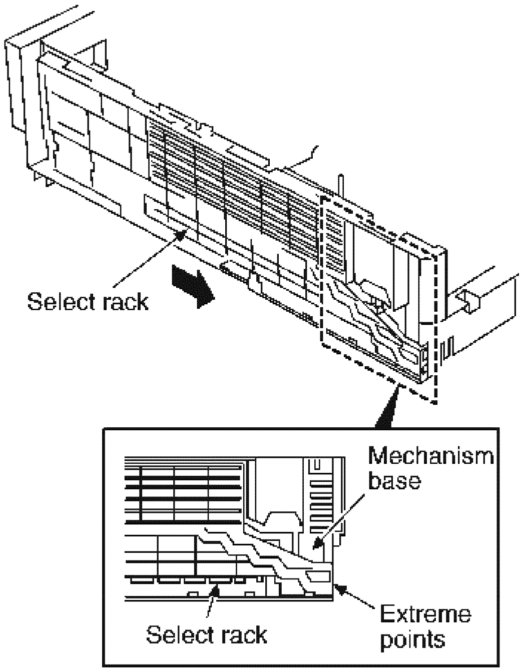

Change gear
Groove of change gear.
Change lever

(Step 25)
Put change gear down with projection part of change gear fitted to triangle mark of mechanism base, when fixing change gear.
At that time, check change gear is inserted into the groove of change lever.

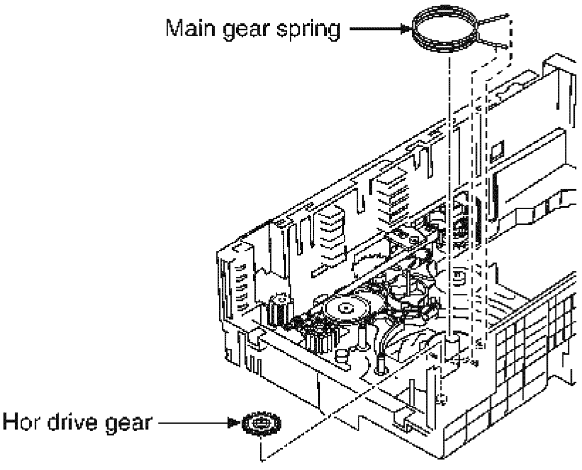
(Step 26)
Lastly, turn GENEVA gear clockwise slightly and drop change gear to mechanism base.

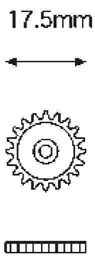

GENEVA gear
Change lever
Triangle mark of mechanism base
Projection part of mechanism base

(Step 27)
Move the select rack smoothly forward manually until 2 extreme points of both select track and mechanism base.


Select rack
Mechanism base
Extreme points
Select rack

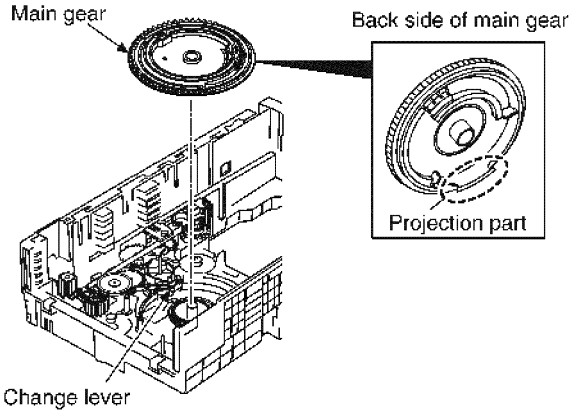
(Step 28)
Install the main gear spring and hor drive gear.


Main gear spring
Hor drive gear


17.5mm
Hor drive gear
(White)

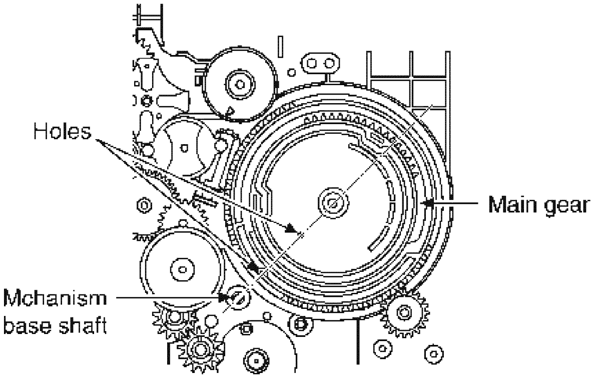
(Step 29)

Don't bring change lever into touch to projection part of main gear, when fixing main gear in mechanism base.


Main gear
Back side of main gear
Projection part
Change lever

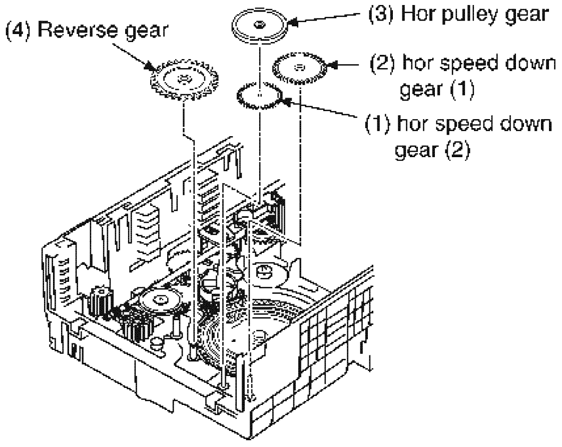
(Step 30)

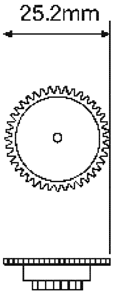
After that, turn main gear so that 2 holes inside main gear would be in alignment with mechanism base.


Holes
Main gear
Mchanism base shaft

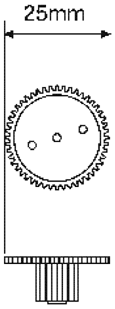
(Step 31)

Install the hor speed down gear (2), hor speed down gear (1), hor pullry gear and reverse gear.

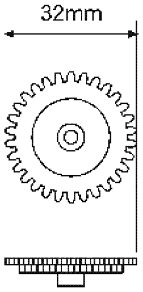

(4) Reverse gear
(3) Hor pulley gear
(2) hor speed down gear (1)
(1) hor speed down gear (2)



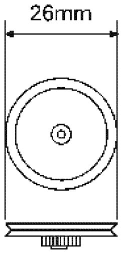
Hor speed down gear (2) (White)



Hor speed down gear (1) (Semi-transparent)



Reverse gear (White)

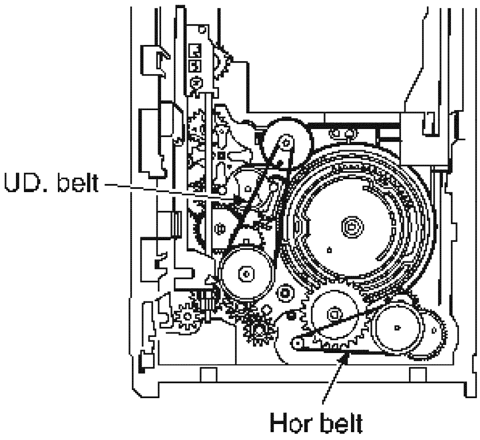


Hor pulley gear (White)

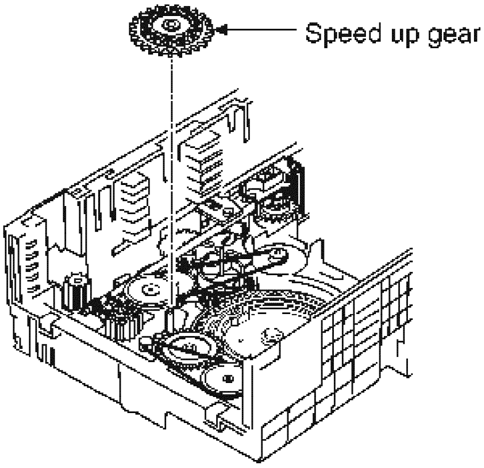
(Step 32)
Install the UD. belt and hor belt.

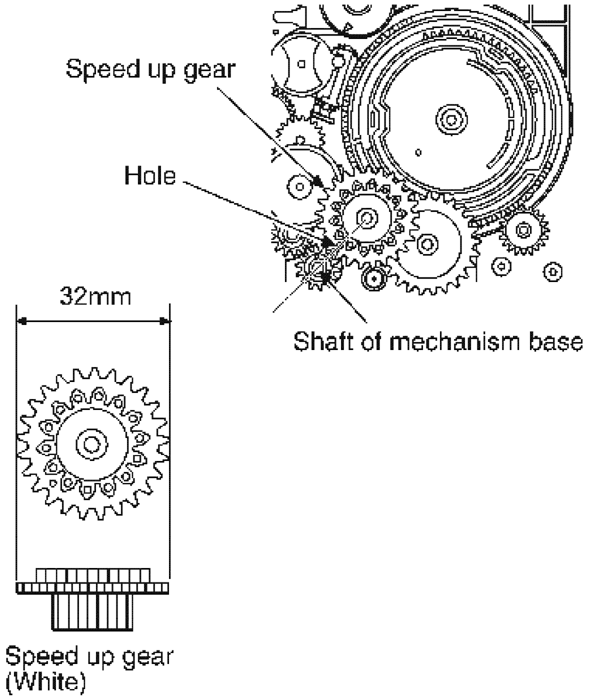
NOTE:

1. Take care not apply the grease to the belt.
2. Install the belt without twist.


UD. belt
Hor belt

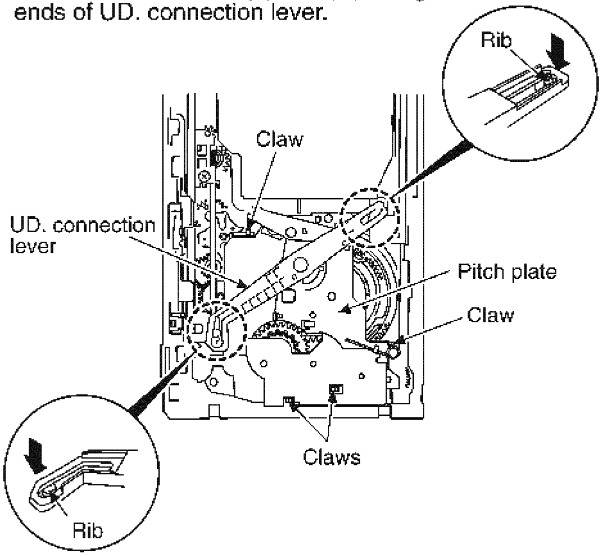
(Step 33)
Install speed up gear to its shaft of mechanism base with 2 fitting.


Speed up gear

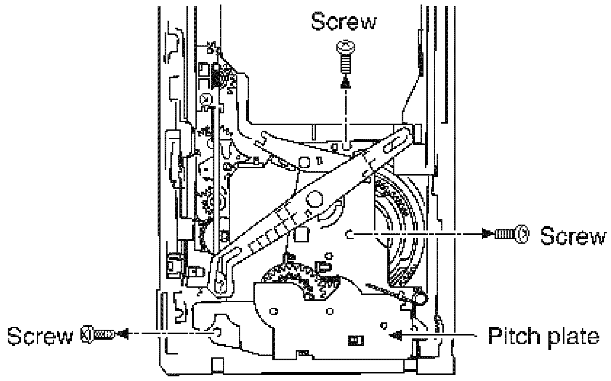

Speed up gear
Hole
32mm
Shaft of mechanism base
Speed up gear
(White)

(Step 34)
Install the pitch plate. (The 4 claws should be latched.)

(Step 35)
Fix 2 ribs of UD. rack (L) and (R) into groove of both ends of UD. connection lever.

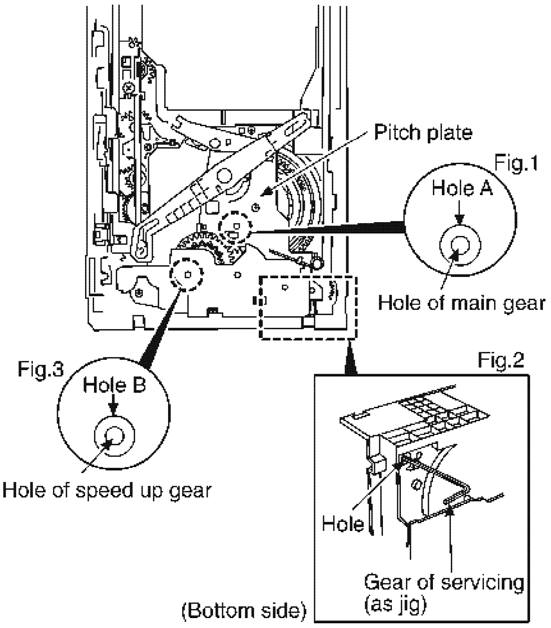

Rib
Claw
UD. connection lever
Pitch plate
Claw
Claws
Rib

(Step 36)
Fixed it by three screws further.


Screw
Screw
Screw
Pitch plate

(Step 37)
Be sure the notice of below before fixing the traverse mechanism.

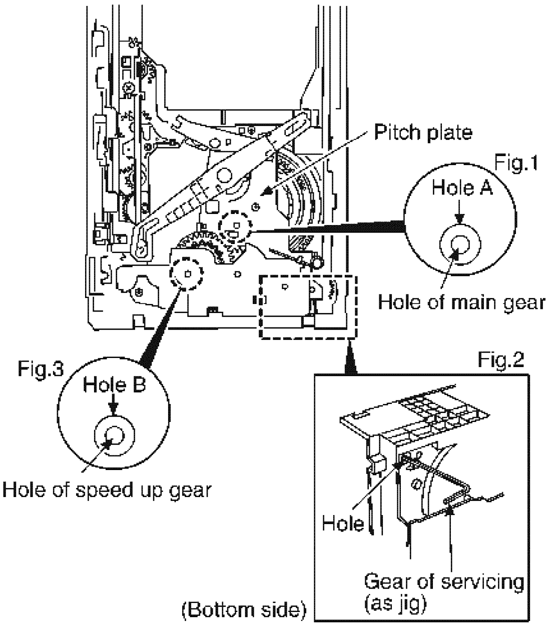
1. Check that 2 holes of both pitch plate and main gear is fitted. (Refer to Fig.1)
   If it's not fitted, put the gear for servicing in the hole of the bottom side and adjust it. (Refer to Fig.2)
2. Check that 2 holed of both pitch plate and speed up gear is futted. (Refer Fig.3)
   If it's not fitted turn the speed up gear to adjust it.


Pitch plate
Fig.1
Hole A
Hole of main gear
Fig.3
Hole B
Hole of speed up gear
Fig.2
Hole
Gear of servicing (as jig)
(Bottom side)

(Step 37)

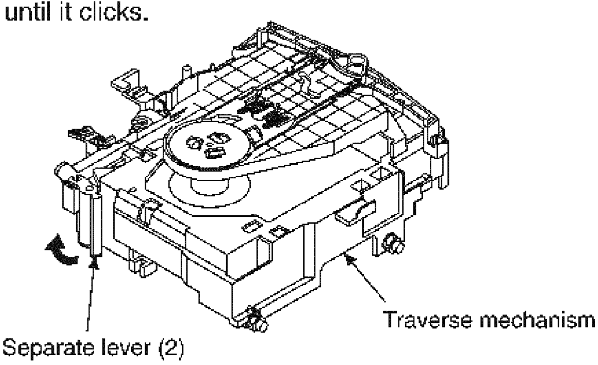
Be sure the notice of below before fixing the traverse mechanism.

1. Check that 2 holes of both pitch plate and main gear is fitted. (Refer to Fig.1)
   If it's not fitted, put the gear for servicing in the hole of the bottom side and adjust it. (Refer to Fig.2)
2. Check that 2 holed of both pitch plate and speed up gear is futted. (Refer Fig.3)
   If it's not fitted turn the speed up gear to adjust it.

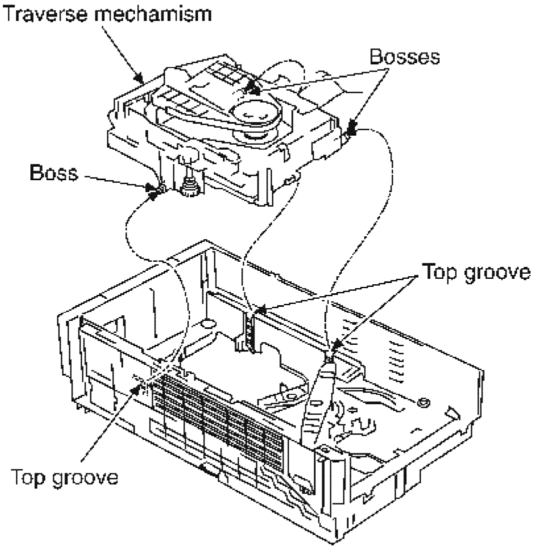

Pitch plate
Fig.1
Hole A
Hole of main gear
Fig.3
Hole B
Hole of speed up gear
Fig.2
Hole
Gear of servicing
(as jig)
(Bottom side)

(Step 38)

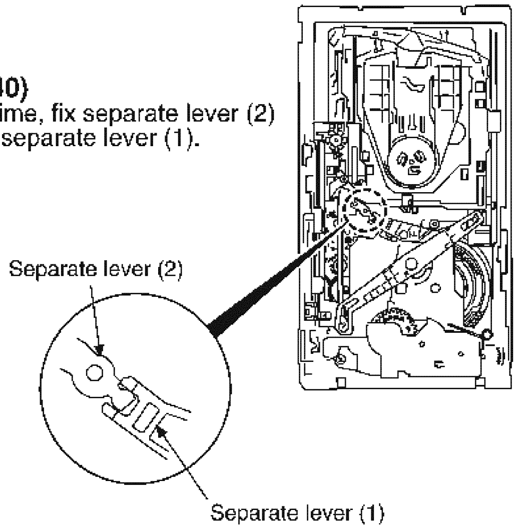
Turn the separate lever (2) slowly toward left side until it clicks.


Traverse mechanism
Separate lever (2)

(Step 39)
Fix the left boss into the top groove of the UD. rack (L) and fix 2 bosses into the groove of the UD. rack (R).


Traverse mechamism
Bosses
Boss
Top groove
Top groove

(Step 40)
At that time, fix separate lever (2) into the separate lever (1).


Separate lever (2)
Separate lever (1)

(Step 41)

After the traverse mechanism fixed,
confirm the phase in order below.

1. Check that 2 holes of both pitch plate and main gear is fitted. (Refer to Fig.1)
   If it's not fitted, put the gear for servicing in the hole of the bottom side and adjust it. (Refer to Fig.2)
2. Check that 2 holed of both pitch plate and speed up gear is futted. (Refer Fig.3)
   If it's not fitted turn the speed up gear to adjust it.

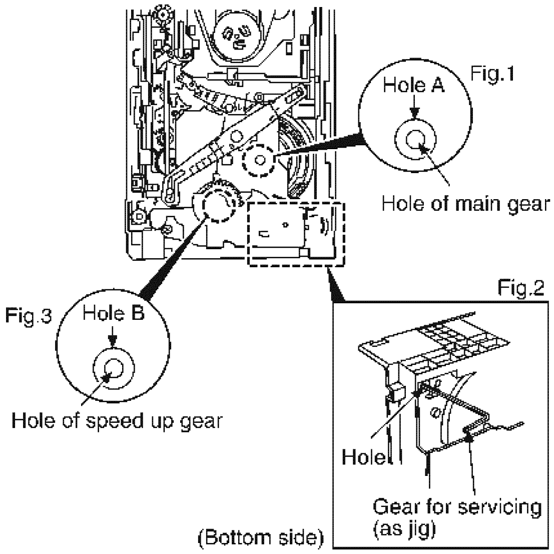
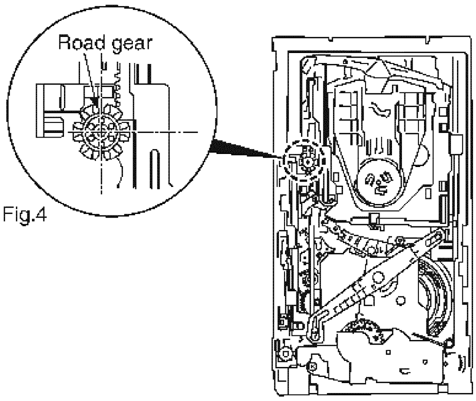
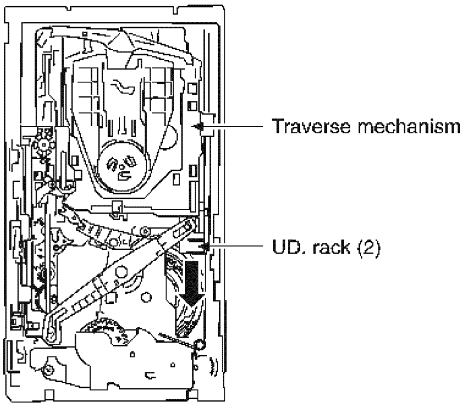


Fig.1
Hole A
Hole of main gear
Fig.2
Hole
Gear for servicing
(as jig)
(Bottom side)
Fig.3
Hole B
Hole of speed up gear

3. In the cog of road gear, the groove with it's cutting halfway set side ward. (Refer to Fig.4)
   Remove the traverse mechanism again when it is not set side ward and install it after adjustment of inserting position.
   NOTE: By this time, do not adjust to rotate the road gear.

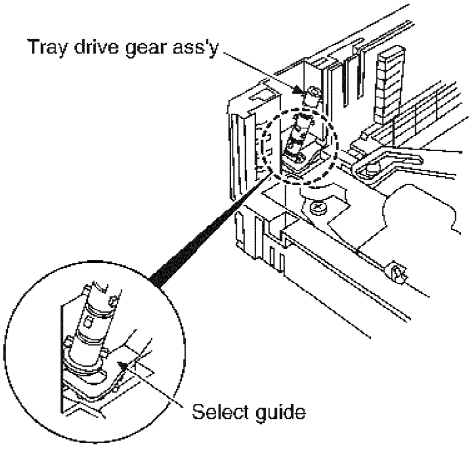

Road gear
Fig.4

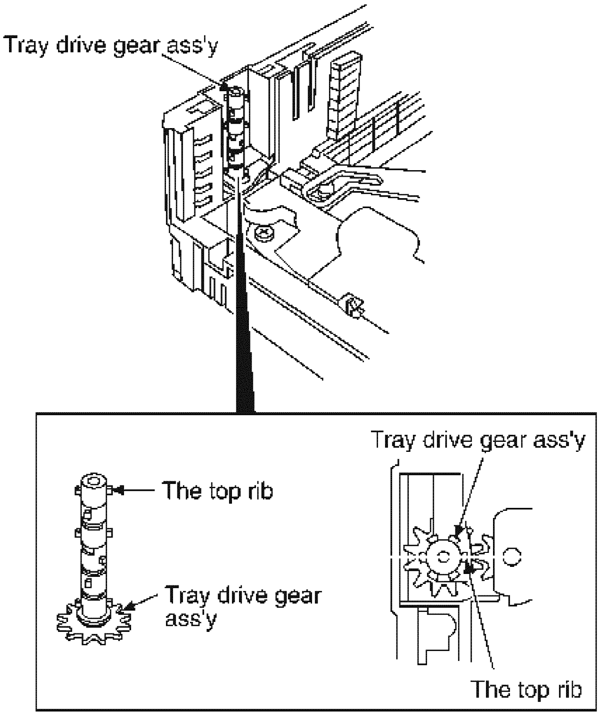
(Step 42)
After insertion of traverse mechanism, pull the UD. rack (R) on this side that each phase is "OK" and then lock the traverse mechanism.


Traverse mechanism
UD. rack (2)

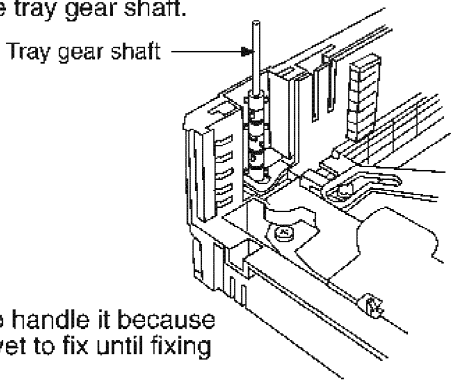
(Step 43)
Install the tray drive gear to select guide.
(Install the top rib of the tray drive gear with side ward.)

NOTE:
Confirm the each phase surely before install the tray drive gear. (Refer to Step 41).


Tray drive gear ass'y
Select guide

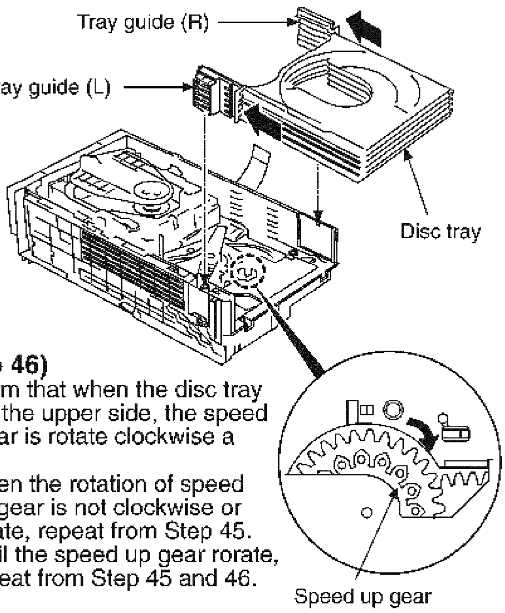

Tray drive gear ass'y
Tray drive gear ass'y
The top rib
Tray drive gear ass'y
The top rib

(Step 44)
Insert the tray gear shaft.


Tray gear shaft

NOTE:
Be careful to handle it because the shaft is yet to fix until fixing top cover.

(Step 45)
Move the tray guide (R) and (L) to direction of arrow that fixed (stopped) it and install 5 pieces of disc tray.

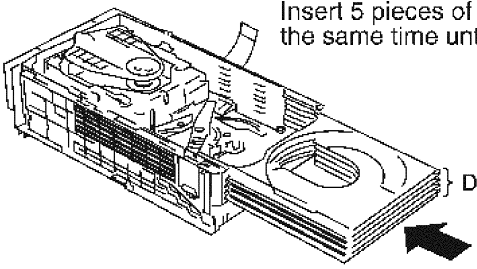

Tray guide (R)
Tray guide (L)
Disc tray
Speed up gear

(Step 46)
Confirm that when the disc tray insert the upper side, the speed up gear is rotate clockwise a little.

- When the rotation of speed up gear is not clockwise or rotate, repeat from Step 45.
- Until the speed up gear rorate, repeat from Step 45 and 46.

NOTE:
While keeping all postion, install 5 pieces of disc tray.

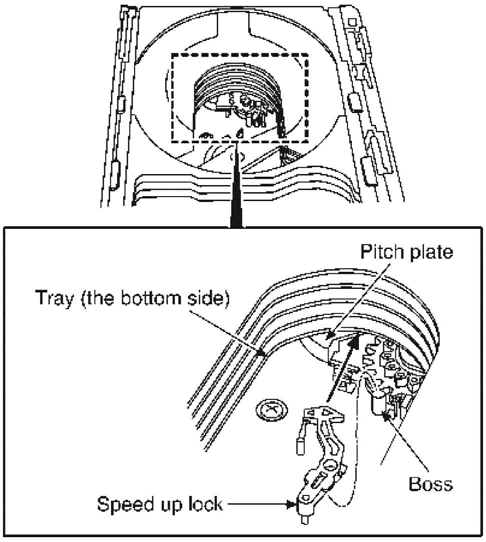
(Step 47)
Insert 5 pieces of disc tray at the same time until it's stop.



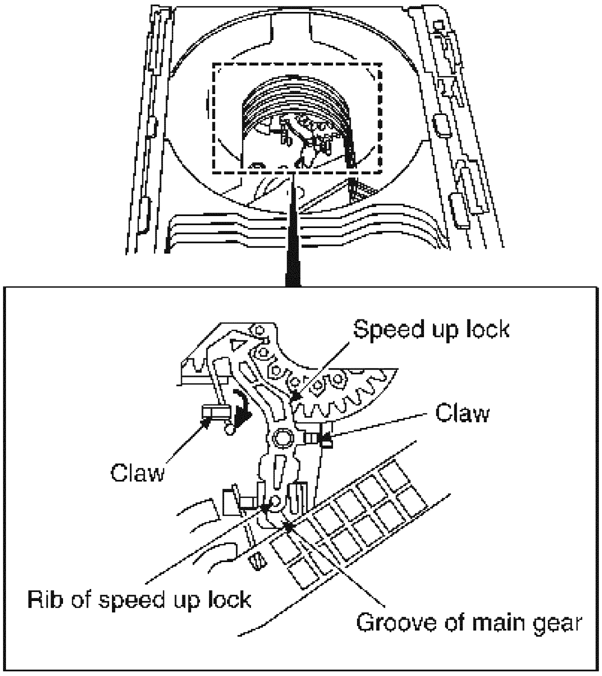
(Step 48)
Turn the traverse side 180°.

(Step 49)
While install the tip of speed up lock beween tray (No.1) of the most lower side and pitch plate for the time being.
(Do not to insert the cog of speed up gear), insert it to boss.

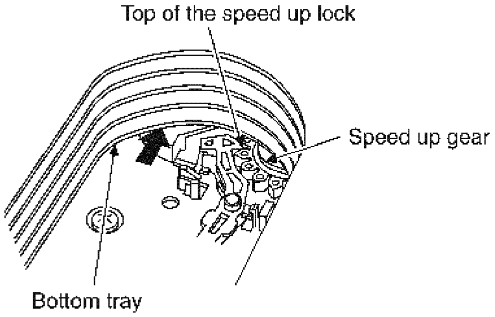
NOTE:
At that time, do not move the tray.
(See the tray the most front side)


Pitch plate
Tray (the bottom side)
Boss
Speed up lock

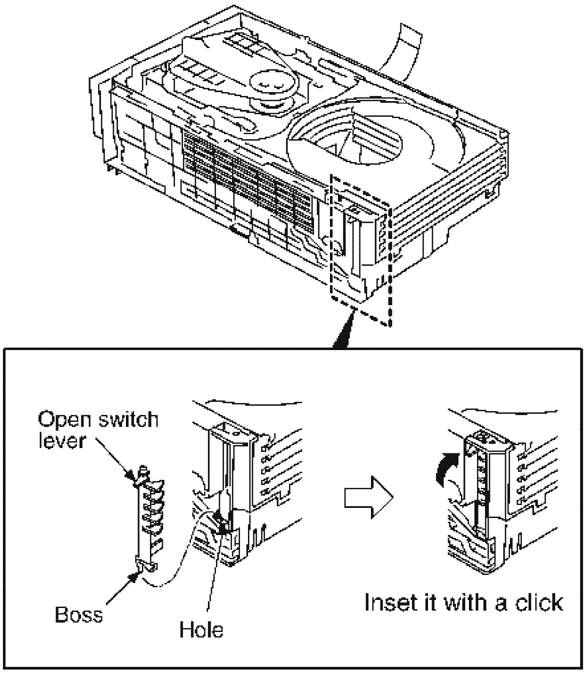
(Step 50)
Insert the rib of speed up lock into a groove of main gear, and lock it with 2 claws.


Speed up lock
Claw
Claw
Rib of speed up lock
Groove of main gear

(Step 51)
Move the bottom tray to the arrow while pushing the top of the speed up gear. And insert it to a cog of the speed up gear.

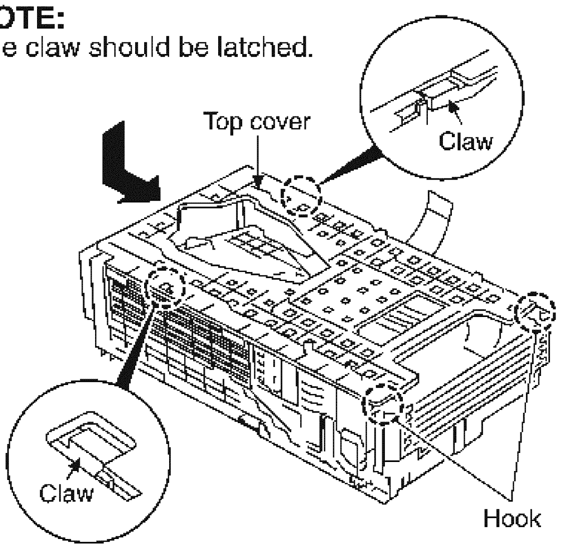

Top of the speed up lock
Speed up gear
Bottom tray

(Step 52)
Install the open switch lever.
(Put the boss into the hole of the mechanism base.)


Open switch lever
Boss
Hole
Inset it with a click

(Step 53)
Install the top cover.
Fix it into hooks and slide direction to the arrow.

NOTE:
The claw should be latched.

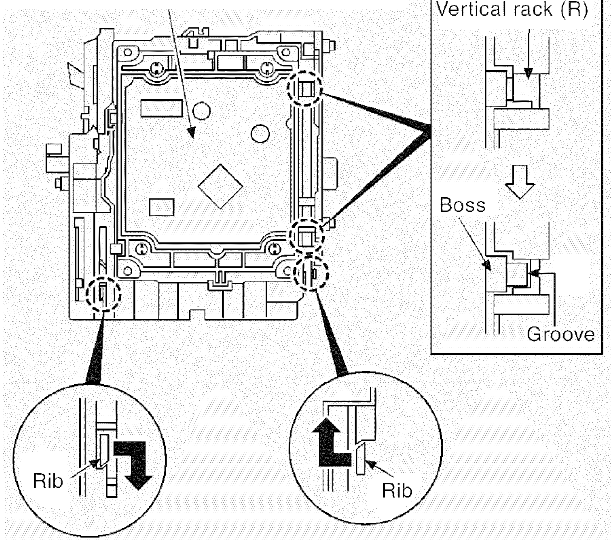

Top cover
Claw
Claw
Hook

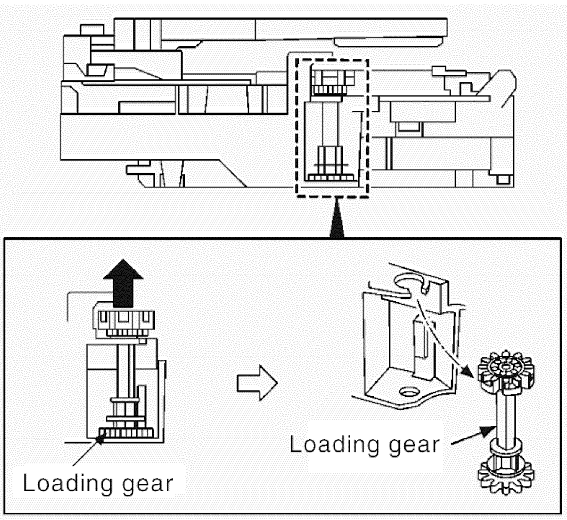
8.12. Disassembly of traverse mechanism

- **Follow the (Step 1) - (Step 14) of Item 8.1.**
- **Follow (Step 1) - (Step 7) described in Item 8.10.**
- **Follow (Step 1) - (Step 7) described in Item 8.11.**
- **Follow Step 1 described in Item 8.11.**

Step 1
Shift ribs of both side to the arrow direction.
(A vertical rack (R) slides and groove opens)

Step 2
Remove CD traverse deck.

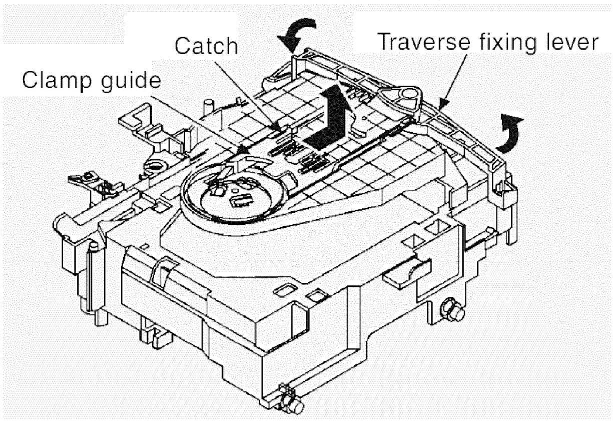

Vertical rack (R)
Boss
Groove
Rib
Rib

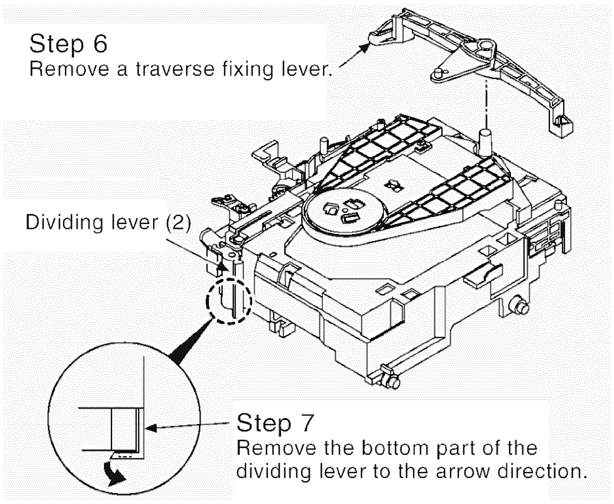

Loading gear
Loading gear

Step 3
Lift a loading gear slightly and pull out.

Step 4
Fixing lever to the arrow direction, rotate a traverse.

Step 5
Remove catch and take out a clamp guide.

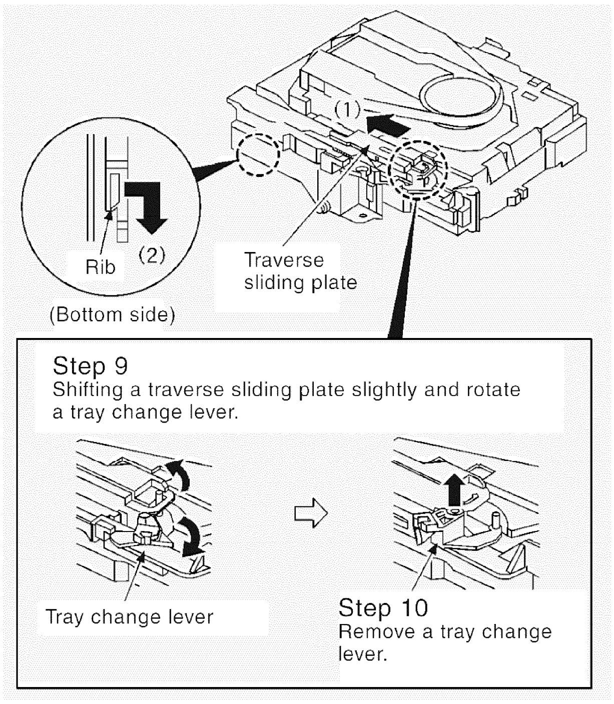

Catch
Clamp guide
Traverse fixing lever


Dividing lever (2)

Step 6
Remove a traverse fixing lever.

Step 7
Remove the bottom part of the dividing lever to the arrow direction.

Step 8
Slide a traverse sliding plate to the arrow direction (1), and shift a rib to the arrow direction (2).

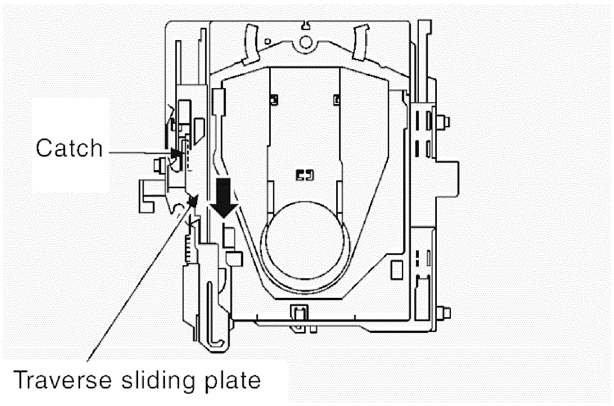


(1)
Rib
(2)
(Bottom side)
Traverse sliding plate
Tray change lever

Step 9
Shifting a traverse sliding plate slightly and rotate a tray change lever.

Step 10
Remove a tray change lever.

Step 11
Holding the catch down, slide a traverse sliding plate to the arrow direction and remove it.



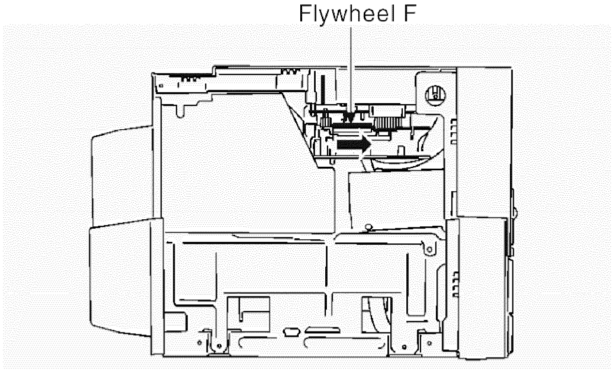
Catch
Traverse sliding plate

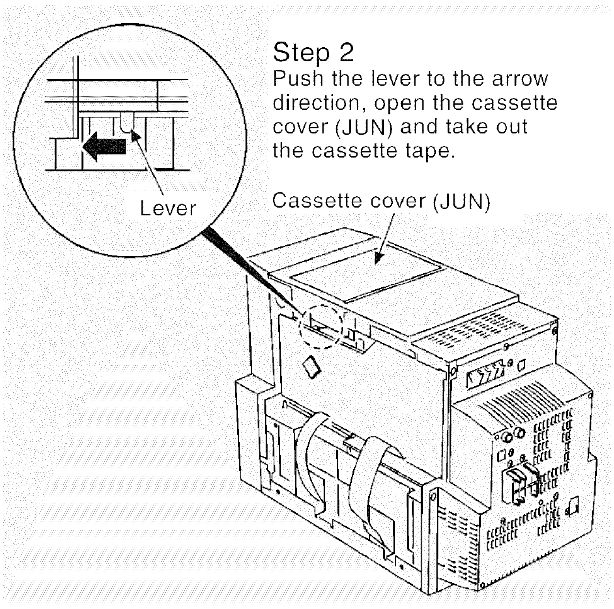
8.13. Handling of cassette tape jam

- Follow the (Step 1) - (Step 4) of Item 8.1.

-

Step 1
If the cassette tape is not ejected due to twining around capstan or pinch roller during playing or recording, rotate a flywheel F to the arrow direction to remove twined tape.




Step 2
Push the lever to the arrow direction, open the cassette cover (JUN) and take out the cassette tape.

9. Self-Diagnostic Display Function

This unit is equipped with a self-diagnostic display function, which will be useful during servicing and maintenance.

- Refer to the next page for display symbols, symptoms, etc.

9.1. Preparations

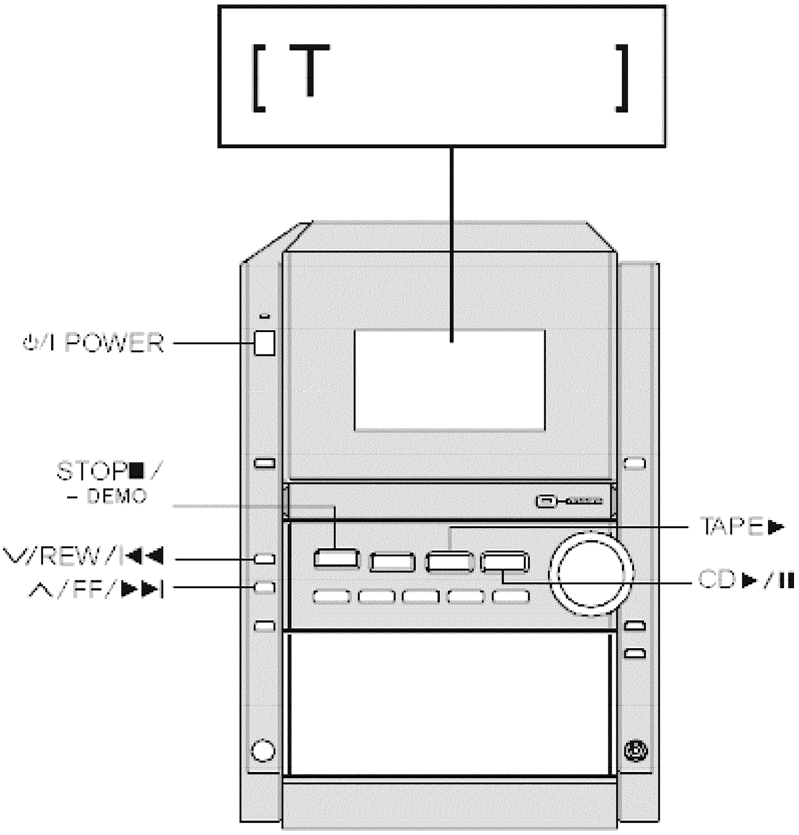
1. **A Cr02-positioned blank cassette tape with an erase prevention niche on either Side A or B.**
2. **A normal-positioned music tape with erase prevention niches on both Sides A and B. Both tapes are halfway forwarded in advance.**
3. **The remote controller that comes with this unit.**

9.2. Setting of the Self-Diagnostic Mode

No.	Operation Procedure	Operation and Processing of Microcomputer
1	Switch the SELECTOR to TAPE. There should be NO cassettes loaded.	
2	Press the [■ /-DEMO] key for 2 sec and press [∧ /FF/▶▶|] for another 2 sec, it shall enter into the self-diagnostic mode.	[T] shall be displayed in the FL.

9.3. Restoring Normal Display

- **From the F76 display, the normal display does not appear till an error is recovered.**
- **For displays other than F76, press “POWER” button to turn off the power, and then turn on the power.**



9.4. Clearing Self-Diagnostic Memory

<CD Section> (F15, F17, F22, F26, F27, F28, F29)

1. **Enter a self-diagnostic mode.**
2. **Press "■/-DEMO" button. A symbol of self-diagnostic is indicated on the display if an error is found. If several errors are found, a respective indication is displayed when "■/-DEMO" button is pressing repeatedly. (e.g. H01 → CD F15 → F01) / If no error is found, only "TEST" indication is displayed and remains unchanged even if "■/-DEMO" button is pressed.**

9.5. Displaying Self-Diagnostic Results

<Cassette Deck Section> (H01, H02, H03, F01, F02)

1. Enter the self-diagnostic mode, following the instructions described in [5.2. Entering Self-Diagnostic Mode].
2. Insert a normal-positioned music tape with erase prevention niches on both Sides A and B. Press [TAPE ▶] button to activate the TPS operation so that the tape automatically stops at an interval between music selections.
3. Press [■ /CLEAR] and [TAPE ▶] buttons together on the remote controller. (Recording does not start.)
4. Then, insert a Cr02-positioned blank cassette tape with an erase prevention niche of Side A or B set to the left side.
5. Press [∧ /FF/ ▶▶|] button. The tape will be forwarded and automatically stop after two seconds.
6. Remove the cassette tape, and set the other side.
7. Press [∨ /REW/ |◀◀] button. The tape will be rewound and automatically stops after two seconds.
8. Press [■/-DEMO] button on the unit.
   If an error is found, a self-diagnostic key appears on the display.

   If several errors are found, the display shows these keys when [■/-DEMO] button is pressed repeatedly. (Ex.: H01 - H02 - F01 - H01)
   If no error is found, only the message, “CD TEST” appears on the display.

(*1) TPS operation (music search) detects the blank sections between music selections. Therefore, do not use tapes with the following conditions:

- A blank section that lasts only 4 seconds or less.
- No blank sections (recording through microphones, etc.).
- Music selections that have extremely low pitches or prolonged silent sections (such as classical music).
- and/or Music recorded with fade in/out effect.

Displayed Key	Symptoms	Causes and Troubleshooting
H01	Cassette mchanism operates erratically. Ex.: REV operation starts even when "FWD" button is pressed.	Malfunction of cassette mechanism mode switch (S971), plunger, and capstan motor. (Check and replace the parts.)
H02	Recording fails or starts when an erase prevention tab on cassette tape is broken off.	Malfunction or short-circuit of erase prevention detect switch (S974, S975). (Check and replace the parts.)
H03	No playback when "TAPE ▶" button is pressed. The motor operates when no cassette tape is inserted and "TAPE ▶" button is pressed.	Malfunction or short-circuit of cassette mechanism tape detect switch (S972). (Check and replace the parts.)
F01	Tape playbacks and stops soon after "TAPE ▶" button is pressed.	Reel pulse problem. Malfunction of photo interrupter (IC971). (Check and replace the parts.)
F02	TPS does not operate.	Malfunction of playback EQ/recording amplifier IC (IC1302). (Check and replace the parts.)
F15	CD REST SW abnormal.	CD traverse position initial setting operation failsafe counter (1000 ms) waiting for REST SW to turn on. Error No. shall be cleared by force or duing coldstart.
F17	DOWN SW abnormal.	During vertical operation going to the bottom position, if failsafe timer is finished and switch no change or switch target condition was not achieve, this error shall be memorized. The next time mechanism operates, it shall do mechanism initialization. Error No. shall be cleared by force or coldstart.
F22	Loading Mode / Mecha abnormal.	During mehca initialization, Loading mode mechanism abnormal, normal operation cannot be achieved. The next time mechanism operates, it shall do mechanism initialization. Error No. shall be cleared by force or coldstart.
F26	CD servo LSI command signal abnormal.	CD function DTMS command, after system setting, if SENSE = 'L' cannot be detected. Memory shall contain F26 code. After Power on, CD function shall continue, error shall occur "NO DISC". Error No. shall be cleared by force or coldstart.
F27	Slide operation abnormal.	During vertical operation, if failsafe timer is finished and switch no change or switch target condition was not achieve, this error shall be memorized. Next time mechanism operates, it shall do coldstart. Error No. shall be cleared by force or coldstart.
F28	DISC load abnormal.	While going to play position, if failsafe counter is finished and switch no change or switch target condition was not achieve, this error shall be memorized. Next time mechanism operates, it shall do coldstart. Error No. shall be cleared by force or coldstart.
F29	DISC unload abnorml.	While going to play position, if failsafe counter is finished and switch no change or switch target condition was not achieve, this error shall be memorized. Next time mechanism operates, it shall do coldstart. Error No. shall be cleared by force or coldstart.

9.6. Cold Start Setting

9.6.1. Doctor Mode Setup

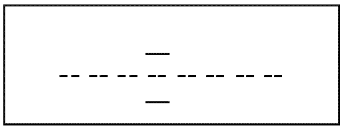
1. **Set to TAPE mode.**
2. **To enter Doctor mode, input 4 then 7 from the remote control while pressing "STOP" key of the main set.**
3. **The CLEAR key on the remote controller shall end the test and exit Doctor mode.**
4. **When plug out from Doctor mode, it will reset when plug in back**

9.6.2. Cold Start Setting

1. **Doctor mode ON.**

2. Remote control SLEEP key ON.

- Data shall be set in order to make a cold start (backup data are initialized) when reset starts next time.
To clarify that the code was accepted at this time, the pattern below is displayed in the LCD upper row for 2 seconds.



Note: In the case that you unplug from AC outlet after this mode was set, then plug to AC again, a cold start shall begin.

10. Precaution of Laser Diode

Caution :

This product utilizes a laser diode with the unit turned "ON", invisible laser radiation is emitted from the pick up lens. / Wavelength : 780 nm / Maximum output radiation power from pick up : 100 μ W/VDE / Laser radiation from pick up unit is safety level, but be sure the followings:

1. **Do not disassemble the optical pick up unit, since radiation from exposed laser diode is dangerous.**
2. **Do not adjust the variable resistor on the pick up unit. It was already adjusted.**
3. **Do not look at the focus lens using optical instruments.**
4. **Recommend not to look at pick up lens for a long time.**

ACHTUNG :

Dieses Produkt enthält eine Laserdiode. Im eingeschalteten Zustand wird unsichtbare Laserstrahlung von der Lasereinheit abgestrahlt. / Wellenlänge : 780nm / Maximale Strahlungsleistung der Lasereinheit : 100 μ W/VDE / Die Strahlung an der Lasereinheit ist ungefährlich, wenn folgende Punkte beachtet werden:

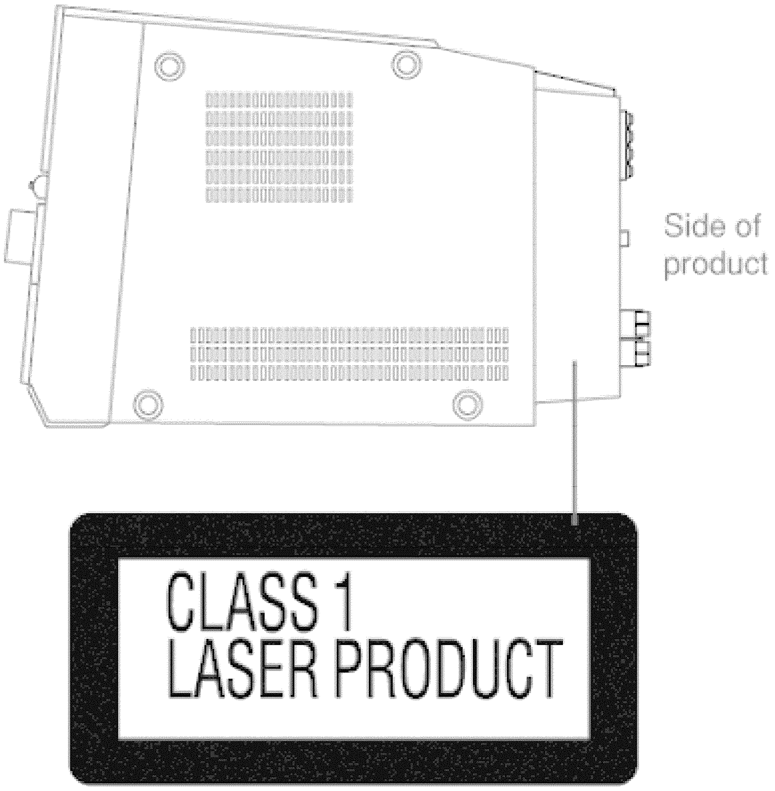
1. **Die Lasereinheit nicht zerlegen, da die Strahlung an der freigelegten Laserdiode gefährlich ist.**
2. **Den werkseitig justierten Einstellregler der Lasereinhit nicht verstellen.**
3. **Nicht mit optischen Instrumenten in die Fokussierlinse blicken.**
4. **Nicht über längere Zeit in die Fokussierlinse blicken.**

ADVARSEL: I dette a apparat anvendes laser.

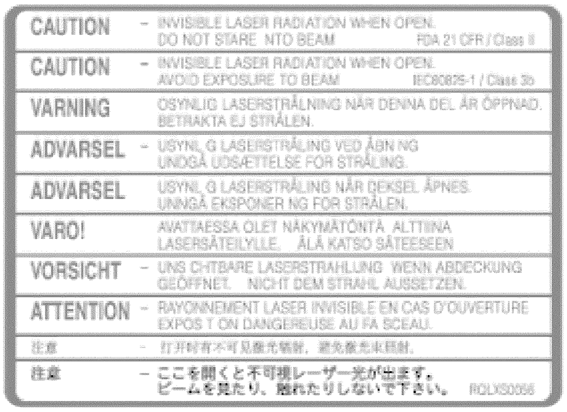
CAUTION!

THIS PRODUCT UTILIZES A LASER.
USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

■ Use of Caution Labels



LUOKAN 1 LASERLAITE
KLASS 1 LASER APPARAT



CAUTION - INVISIBLE LASER RADIATION WHEN OPEN. DO NOT STARE INTO BEAM FDA 21 CFR / Class II
CAUTION - INVISIBLE LASER RADIATION WHEN OPEN. AVOID EXPOSURE TO BEAM IEC60825-1 / Class 3b
VARNING OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD. BETRAKTA EJ STRÅLEN.
ADVARSEL - USYNLIG LASERSTRÅLING VED ÅBNING UNDGÅ UDSÆTTELSE FOR STRÅLING.
ADVARSEL USYNLIG LASERSTRÅLING NÅR DEKSEL ÅPNES. UNNGÅ EKSPONERING FOR STRÅLEN.
VARO! AVATTAESSA OLET NÄKYMÄTÖNTÄ ALTTIINA LASERSÄTEILYLLE. ÄLÄ KATSO SÄTEESEEN
VORSICHT - UNSICHTBARE LASERSTRAHLUNG WENN ABDECKUNG GEÖFFNET. NICHT DEM STRAHL AUSSETZEN.
ATTENTION - RAYONNEMENT LASER INVISIBLE EN CAS D'OUVERTURE EXPOSITION DANGEREUSE AU FAISCEAU.
注意 - 打开时有不可见激光辐射，避免激光束照射。
注意 - ここを開くと不可視レーザー光が出ます。ビームを見たり、触れたりしないで下さい。 RQLXS0056

Inside of product
Tuotteen sisällä
Produktets innside

11. Procedure for Checking Operation of Individual Parts of Cassette Mechanism Unit

11.1. Operation Check with Cassette Tape

1. **Pull up the EJECT lever using a rubber band. (Cf. Fig. 6)**
2. **Supply DC5V to MOTOR. (→ MOTOR rotates.) (Cf. Fig. 5)**
3. **Insert a cassette tape to the unit.**
4. **Supply DC9V to the plunger, and turn the power ON and OFF. (→ Power +PL, -PL) (Cf. Fig. 5)**
   - **A. FWD PLAY: Supply the plunger power in a flash. (ON: approx. 5msec)**
   - **B. FWD FF: Supply the plunger power in a flash at PLAY mode. (ON: approx. 5msec)**
   - **C. STOP: Supply the plunger power in a flash at FWD FF mode. (ON: approx. 5msec)**
   - **D. REV PLAY: Supply the plunger power in a normal timing at STOP mode. (ON: approx. 200msec)**
   - **E. REV REW: Supply the plunger power in a flash at REV PLAY mode. (ON: approx. 50msec)**
   - **F. STOP: Supply the plunger power in a flash at FF mode. (ON: approx. 50msec)**

     Repeat the operation (→ FWD PLAY)

     (Note) Other operation may start if a timing of supplying the plunger power is missed.

11.1.1. Connection Status between Mechanism and Power Supply (Motor, Plunger)

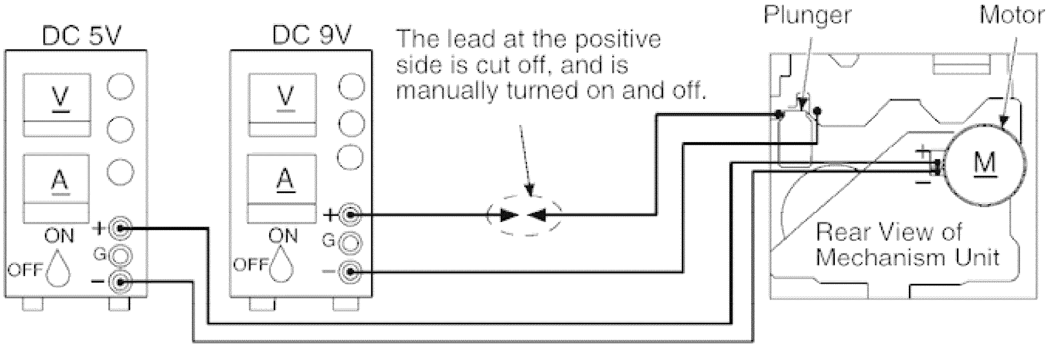
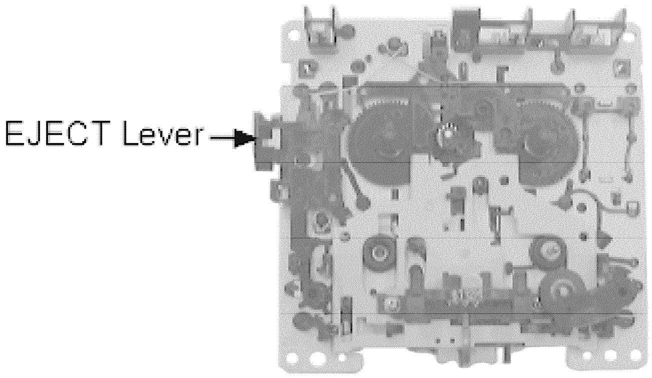

DC 5V
V
A
ON
OFF
+
G
−
DC 9V
V
A
ON
OFF
+
G
−
The lead at the positive side is cut off, and is manually turned on and off.
Plunger
Motor
+
−
M
Rear View of Mechanism Unit

Fig. 5

11.1.2. Operative Parts of Mechanism Unit (EJECT lever fitted with rubber band, / Plunger/Rib operation)

Fig. 6



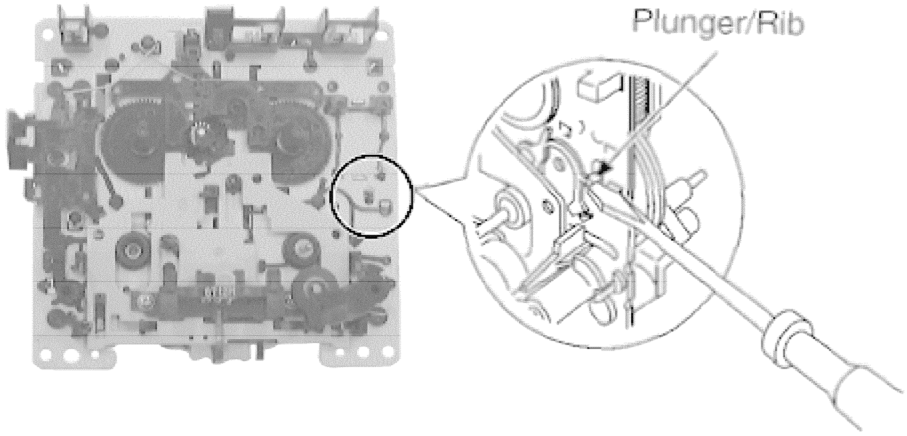
11.2. Operation Check without Cassette Tape

1. Pull up the EJECT lever using a rubber band. (Cf. Fig. 6)

2. Supply DC5V to MOTOR. (→ MOTOR rotates.)

3. Lift up the mechanism unit's plunger/rib with the tip of a negative screwdriver, and operate the unit in the same timing as / supplying the power. (Cf. Fig. 7) /

Fig. 7



12. Measurement And Adjustments

12.1. Tuner Section

12.1.1. AM-IF Alignment

- AM-IF ALIGNMENT

SIGNAL GENERATOR OR SWEEP GENERATOR		RADIO DIAL SETTING	INDICATOR (ELECTRONIC VOLTMETER OSCILLOSCOPE)	ADJUSTMENT(Shown in Fig.3)	REMARK
CONNECTIONS	FREQUENCY				
Fashion a loop of several turns of wire and radiate signal into loop of receiver.	450 kHz	Point of non-interference (on/ about 600 kHz)	Headphone Jack (32 Ω) Fabricate the plug as shown in Fig. 2 and then connect the lead wires of the plug to the measuring instrument.	Z102 (AM IFT)	Adjust for maximum output.

- AM-RF ALIGNMENT

SIGNAL GENERATOR OR SWEEP GENERATOR		RADIO DIAL SETTING	INDICATOR (ELECTRONIC VOLTMETER OSCILLOSCOPE)	ADJUSTMENT(Shown in Fig.1)	REMARK
CONNECTIONS	FREQUENCY				
Fashion a loop of several turns of wire and radiate signal into loop of receiver.	522 kHz	Tuning capacitor fully closed.	Headphone Jack (32 Ω) Fabricate the plug as shown in Fig. 2 and then connect the lead wires of the plug to the measuring instrument.	Z101 (AM OSC Coil)	Adjust for maximum output.
Fashion a loop of several turns of wire and radiate signal into loop of receiver.	603 kHz	Tuning capacitor fully open.	Headphone Jack (32 Ω) Fabricate the plug as shown in Fig. 2 and then connect the lead wires of the plug to the measuring instrument.	Z101 (AM ANT Coil)	Adjust for maximum output.

12.2. Cassette Deck Section

12.2.1. Requirements

- **Test tape (QZZCFM) (QZZCWAT)**
- **Normal blank cassette tape (QZZCRA)**
- **Digital frequency counter**
- **Oscilloscope**
- **Electrical voltmeter**
- **Headphone jack output jig (Cf. Fig. 8)**

12.2.2. Setting of Unit

- **VOLUME: MAX**

12.2.3. Preparations

1. **Apply [8.1. Checking for Main & Transformer P.C.B. , Deck P.C.B. , Tape Eject P.C.B. & Deck Mechanism P.C.B.] under [8. Disassembly and Main Component Replacement Procedures].**
2. **Remove 4 screws from the mechanism unit to disassemble. (Refer to [8.2 Procedure for Replacing Cassette Holder] under [8. Disassembly and Main Component Replacement Procedures].**
3. **Connect the headphone jack output jig (Cf. Fig. 8) to headphone jack.**

Fig. 8

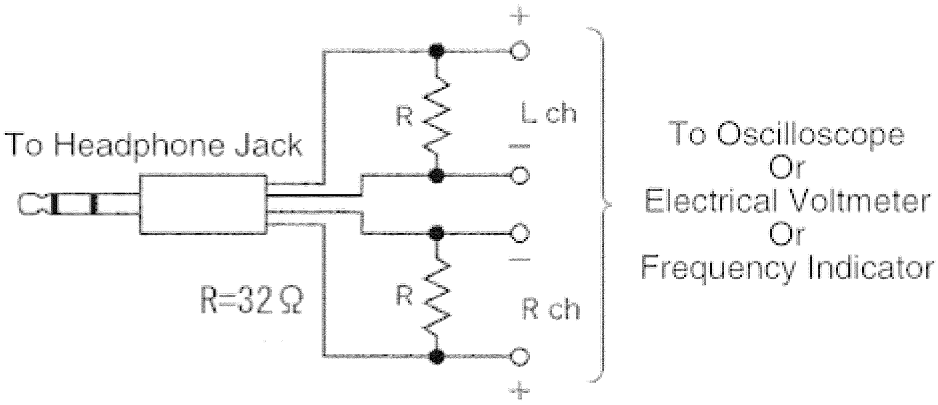
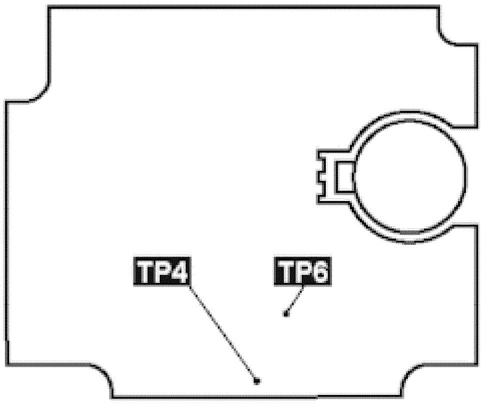

+
R
L ch
−
To Headphone Jack
To Oscilloscope
Or
Electrical Voltmeter
Or
Frequency Indicator
−
R=32Ω
R
R ch
+

Fig. 9



12.2.4. Tape Speed Adjustment

- Normal speed adjustment (only during forward playback)
(Product reference value: 3,000±90Hz)

1. **Connect a frequency indicator. (Cf. Fig. 12)**
2. **Playback the middle portion of the test tape (QZZCWAT).**
3. **Adjust the motor screw so that the following output level is produced.**

(Cf. Fig. 10)
Adjustment Range: 3,000 ± 90Hz (a constant speed)

Fig. 10

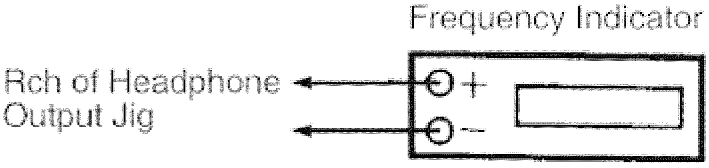
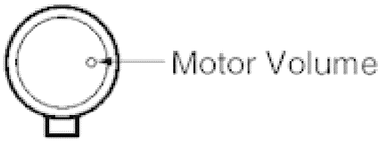

Frequency Indicator
Rch of Headphone Output Jig
+
–

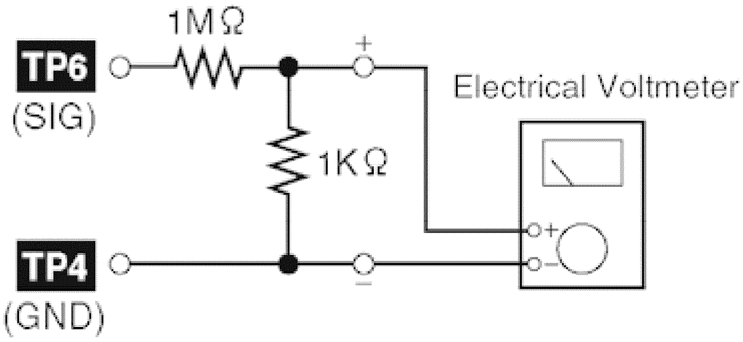
Fig. 11


Motor Volume

12.2.5. Bias Voltage Check

1. Connect an electrical voltmeter. (Cf. Fig. 9) (Cf. Fig. 12)
2. Set the function to “TAPE” position.
3. Insert a normal blank cassette tape (QZZCRA).
4. While pressing and holding down [REC (●/❚❚)] button, press [TAPE (▶)] button to pause the recording mode. (Repeat pressing the buttons till the recording pause mode is activated.)
5. Check that the output level is within the standard range.
   Standard Range: 14 ± 4mV

Fig. 12


1MΩ
TP6
(SIG)
1KΩ
+
Electrical Voltmeter
+
–
TP4
(GND)
–

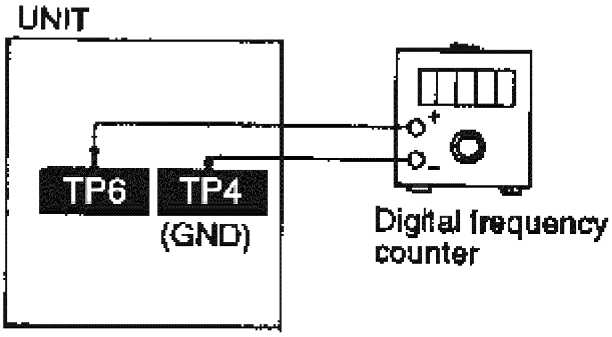
12.2.6. Bias Frequency Check

1. Connect a digital frequency counter (Figure 13).

2. **Set the function to "TAPE" position.**
3. **Insert a normal blank cassette tape (QZZCRA) and press "REC" mode on main unit.**
4. **Check that the output frequency is within the standard range.**

Standard Value: 98 ±8 kHz

Fig. 13



13. Block Diagram

14. Schematic Diagram

(All schematic diagrams may be modified at any time with the development of new technology.)
Notes:

S1	Stock Switch
S2	Play Switch
S3	Bottom Switch
S4	Open Switch
S600	Rec Switch
S602	Tape Eject Switch
S603	Rew Switch
S604	Demo/Stop Switch
S605	FF Switch
S606	CD Play/Pause Switch
S607	Tape Switch
S608	Tuner/Band Switch
S609	AUX Switch
S610	CD Open/Close Switch
S611	Change Switch
S612	CD Check Switch
S613	CD 5 Switch
S614	CD 4 Switch
S615	CD 3 Switch
S616	CD 2 Switch
S617	CD 1 Switch
S618	Power Switch
S619	S.S.EQ Switch
S701	Reset Switch
S780	Open Switch
S971	Mode Switch
S972	Half Switch
S973	CR02 Switch
S974	Recinh_f Switch

- **The voltage value and waveforms are the reference voltage of this unit measured by DC electronic voltmeter (high impedance) and oscilloscope on the basis of chassis. Accordingly, there may arise some error in voltage values and waveforms depending upon the internal impedance of the tester or the measuring unit.**

No mark	**...Playback**	**< >**	**...FM**
(( ))	**...CD**	**( )**	**...AM**

- **Importance safety notice:**
  Components identifed by ⚠ mark have special characteristics important for safety. Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used. When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.

Caution!

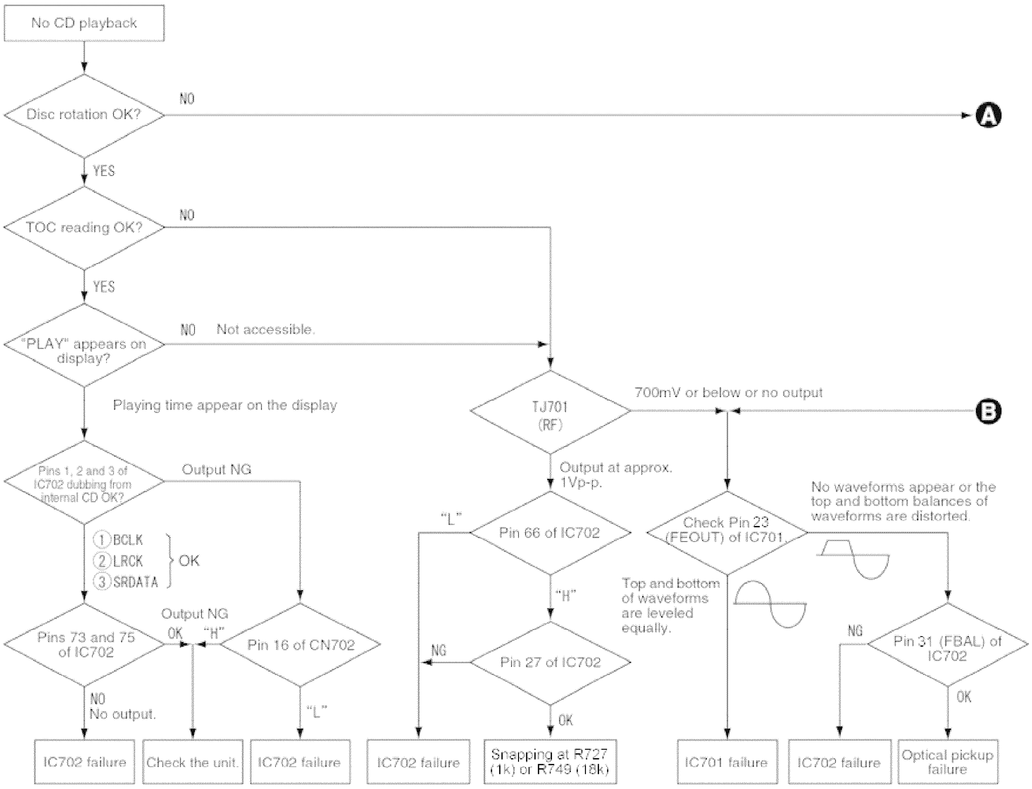
IC, LSI and VLSI are sensitive to static electricity.
Secondary trouble can be prevented by taking care during repair.

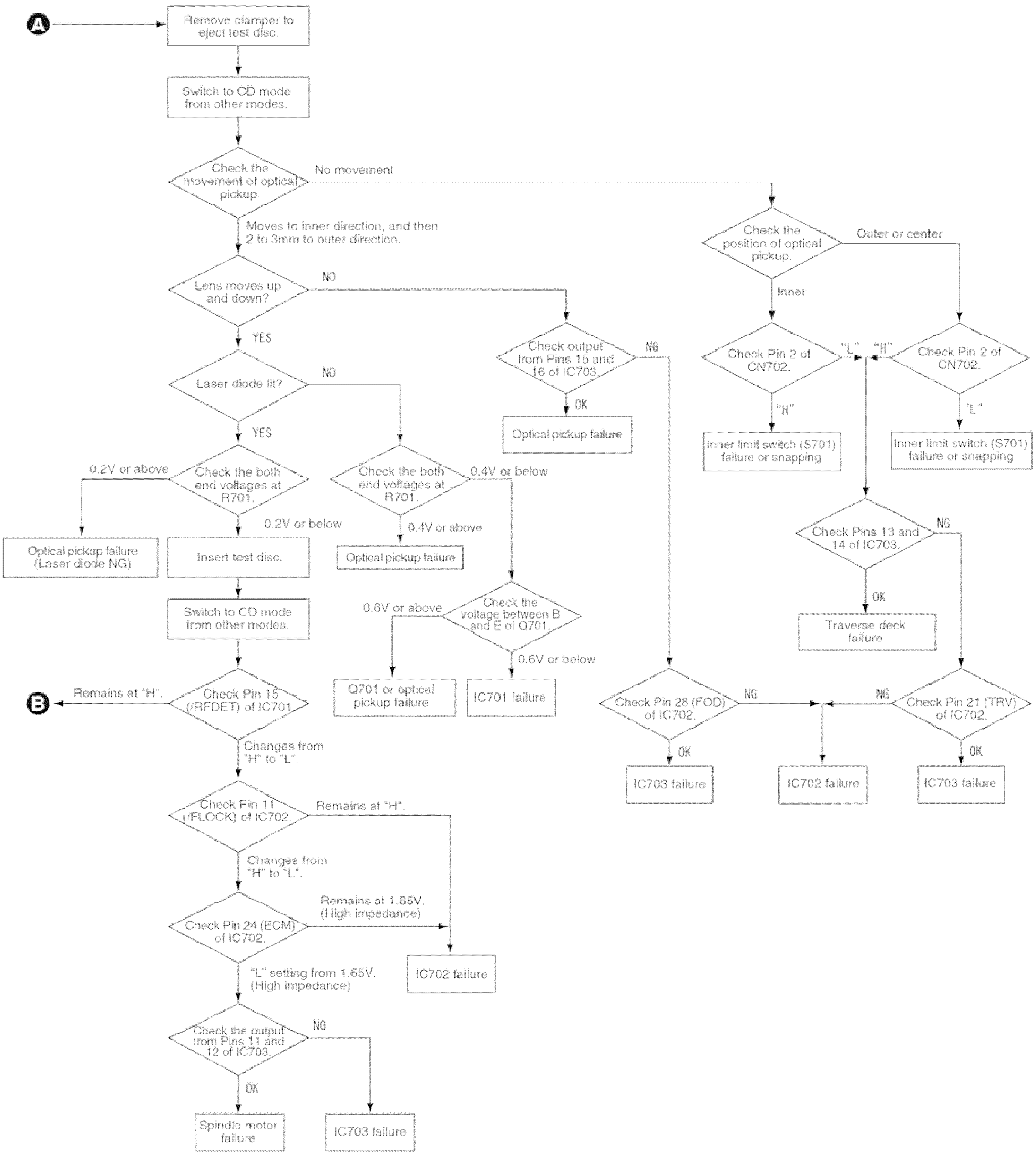
- **Cover the parts boxes made of plastics with aluminium foil.**
- **Put a conductive mat on the work table.**
- **Ground the soldering iron.**
- **Do not touch the pins of IC, LSI or VLSI with fingers directly.**

15. Printed Circuit Board

16. Wiring Connection Diagram

17. Troubleshooting Flowchart (CD Section Circuit)


No CD playback
Disc rotation OK?
NO
A
YES
TOC reading OK?
NO
YES
"PLAY" appears on display?
NO Not accessible.
Playing time appear on the display
TJ701 (RF)
700mV or below or no output
B
Output at approx. 1Vp-p.
Pins 1, 2 and 3 of IC702 dubbing from internal CD OK?
Output NG
①BCLK
②LRCK
③SRDATA
OK
"L"
Pin 66 of IC702
"H"
Check Pin 23 (FEOUT) of IC701
No waveforms appear or the top and bottom balances of waveforms are distorted.
Top and bottom of waveforms are leveled equally.
Output NG
OK
"H"
Pins 73 and 75 of IC702
Pin 16 of CN702
NG
Pin 27 of IC702
NG
Pin 31 (FBAL) of IC702
NO
No output.
"L"
OK
OK
IC702 failure
Check the unit.
IC702 failure
IC702 failure
Snapping at R727 (1k) or R749 (18k)
IC701 failure
IC702 failure
Optical pickup failure


A
Remove clamper to eject test disc.
Switch to CD mode from other modes.
Check the movement of optical pickup.
No movement
Moves to inner direction, and then 2 to 3mm to outer direction.
Lens moves up and down?
NO
YES
Laser diode lit?
NO
YES
0.2V or above
Check the both end voltages at R701.
0.2V or below
Optical pickup failure (Laser diode NG)
Insert test disc.
Switch to CD mode from other modes.
Remains at "H".
B
Check Pin 15 (/RFDET) of IC701.
Changes from "H" to "L".
Check Pin 11 (/FLOCK) of IC702.
Remains at "H".
Changes from "H" to "L".
Check Pin 24 (ECM) of IC702.
Remains at 1.65V. (High impedance)
"L" setting from 1.65V. (High impedance)
IC702 failure
Check the output from Pins 11 and 12 of IC703.
NG
OK
Spindle motor failure
IC703 failure
Check the both end voltages at R701.
0.4V or below
0.4V or above
Optical pickup failure
Check the voltage between B and E of Q701.
0.6V or above
0.6V or below
Q701 or optical pickup failure
IC701 failure
Check output from Pins 15 and 16 of IC703.
NG
OK
Optical pickup failure
Check Pin 28 (FOD) of IC702.
NG
OK
IC703 failure
IC702 failure
Check the position of optical pickup.
Outer or center
Inner
Check Pin 2 of CN702.
"L"
"H"
"H"
Inner limit switch (S701) failure or snapping
Check Pin 2 of CN702.
"L"
Inner limit switch (S701) failure or snapping
Check Pins 13 and 14 of IC703.
NG
OK
Traverse deck failure
Check Pin 21 (TRV) of IC702.
NG
OK
IC703 failure

18. Type Illustrations of ICs, Transistors & Diodes

19. Terminal Function of IC's

19.1. IC701 (AN22004A-NF) Servo Amplifier

Pin No.	Mark	I/O	Function
1	LPD	I	APC Amp input terminal
2	LD	O	APC Amp. output terminal
3	VCC	I	Power source terminal
4	EQSW	-	Equalizer switch terminal
5	RFOUT	O	RF summing Amp output terminal
6	RFIN	I	AGC input terminal
7	AGC	-	AGC loop filter connecting capacitor terminal
8	AGC	O	AGC output terminal
9	HPF-AMP	-	HPF Amp connecting capacitor terminal
10	3TOUT	O	3TOUT output terminal
11	HPFDET	-	Detection system’s HPF connecting capacitor terminal
12	OFTCNT	-	PFTR detection level adjustment terminal
13	BDO	O	BDO output terminal
14	OFTR	O	OFTR output terminal
15	/RFDET	O	NRFDET output terminal
16	LDON	-	LDON terminal
17	GND	-	Earth terminal
18	EQBST	-	Equalizer boost adjustment terminal
19	VREF	O	VREF output terminal
20	TEN	I	Amp inverting input terminal
21	TEOUT	O	TE amp output terminal
22	FEN	I	Amp inverting input terminal
23	FEOUT	O	FE amp output terminal
24	GCTL	-	GCTL terminal
25	FBAL	I	FBAL control terminal
26	TBAL	I	TBAL control terminal
27	E	O	Tracking signal input terminal 1
28	F	O	Tracking signal input terminal 2
29	D	O	Tracking signal input terminal 4
30	B	O	Tracking signal input terminal 2
31	C	O	Tracking signal input terminal 3
32	A	O	Tracking signal input terminal 1

			terminal 3				terminal 1

19.2. IC702 (MN662790RSC) Servo processor/ Digital signal processor/ Digital filter/ D/A converter

No.	Mark	I/O	Function
1	BCLK	O	N.C.
2	LRCK	O	N.C.
3	SRDATA	O	N.C.
4	DVDD1	I	Power supply input (for digital circuit)
5	DVSS1	I	GND (for digital circuit)
6	TX	O	Digital audio interface signal output (Latches data at first transition)
7	MCLK	I	Microprocessor commandclock signal input
8	MDATA	I	Microprocessor command data signal input
9	MLD	I	Microprocessor command load signal input
10	SENSE	O	Sense signal output (OFT, FESL, MADGEND, NAJEND, POSAD, SFG) (Not used, open)
11	/FLOCK/	O	Focus servo feeding signal output (“L”: Feed)
12	/TLOCK	O	Tracking servo feeding signal output (“L”: Feed)
13	BLKCK	O	Sub-code block clock signal output (BLKCKf = 75Hz during normal playback)
14	SQCK	I	External clock signal input for sub-code Q resistor
15	SUBQ	O	Sub-code Q code output
16	DMUTE	I	Muting input (“H”: mute)
17	STAT	O	Status signal output (CRC, CUE, CLVS, TTSTVP, FCLV, SQCK)
18	/RST	I	Reset signal input
19	SMCK	O	1/2-divided clock signal of crystal oscillating at MSEL = “H” (fSCMK = 8.4672 MHz) 1/4-divided clock signal of crystal oscillating at MSEL = “L” (fSMCK = 4.2336 MHz)
20	CSEL	I	Frequency Selection Terminal H = 33.8688 MHz; L = 16.9344 MHz
21	TRV	O	N.C.
22	TVD	O	Traverse drive output
23	PC	O	Spindle motor ON output (“L”: ON)
24	ECM	O	Spindle motor drive signal output (forced mode output)
25	ECS	O	Spindle motor drive signal output (servo error signal output)
26	KICK	O	N.C.
27	TRD	O	Tracking drive output
28	FOD	O	Focus drive output
29	VREF	I	D/A (drive) output (TVD, ECS, TRD, FOD, FBAL, TBAL) Reference voltage input
30	FBAL	O	Focus balance adjustment output
31	TBAL	O	Tracking balance adjustment output
32	FE	I	Focus error signal input (analog input)
33	TE	I	Tracking error signal input (analog input)

No.	Mark	I/O	Function
34	RFENV	I	RF envelope signal input
35	VDET	I	Vibration detection signal input (“H”: detection)
36	OFT	I	Off-track signal input (“H”: off track)
37	TRCRS	I	Track cross signal input
38	/RFDET	I	RF detection signal input (“L”: detection)
39	BDO	I	Dropout signal input (“H”: Dropout)
40	LDON	O	Laser on signal output (“H”: ON)
41	PLLF2	I/O	N.C.
42	DSLF2	O	Tracking Offset alignment output/ DSL Balance Output (DA Output)
43	WVEL	O	N.C.
44	ARF	I	RF signal input
45	IREF	I	Reference current input
46	DRF	I	DSL bias terminal (Not used, open)
47	DSLF	I/O	DSL loop filter terminal
48	PLLF	I/O	PLL loop filter terminal
49	VCOF	I/O	VCO loop filter terminal
50	AVDD2	I	Power supply input (for analog circuit)
51	AVSS2	I	GND (for analog circuit)
52	EFM	-	EFM signal output
53	PCK	-	PLL extraction clock output (fPCK = 4.321 MHz during normal playback)
54	VCOF2	I/O	VCO Loop filter for 33.8688 MHz conversion terminal for 16.9344 MHz crystal mode, must use other circuit

No.	Mark	I/O	Function
55	SUBC	O	Sub-code serial data output
56	SBCK	I	Clock input for sub-code serial data
57	VSS	I	GND
58	X1 IN	I	Crystal oscillating circuit input (f = 16.9344 MHz)
59	X2 OUT	O	Crystal oscillating circuit input (f = 16.9344 MHz)
60	VDD	I	Power supply input (for oscillating circuit)
61	BYTCK	-	Byte clock output
62	/CLDCK	-	Sub-code frame clock signal output (fCLDCK = 7.35 kHz during normal playback)
63	FCLK	-	Crystal frame clock signal output (fCLK = 7.35 kHz, double = 14.7 kHz)
64	IPFLAG	-	Interpolation flag output (“H”: Interpolation)
65	FLAG	-	Flag output
66	CLVS	-	Spindle servo phase synchronizing signal output (“H”: CLV, “L”: rough servo)
67	CRC	-	Sub-code CRC checked output (“H”: OK, “L”: NG)
68	DEMPH	-	De-emphassis ON signal output (“H”: ON)
69	RESY	-	Frame re-synchronizing signal output
70	IOSEL	I	Mode Switching Terminal
71	/TEST	I	Test input
72	AVDD1	I	Power supply input (for analog circuit)
73	OUTL	O	Left channel audio signal output

No.	Mark	I/O	Function
74	AVSS1	I	GND
75	OUTR	O	Right channel audio signal output
76	RSEL	I	RF signal polarity assignment input (at “H” level, RSEL=”H”, at “L” level, RESL = “L”)
77	IOVOD	I	5V supply input
78	PSEL	I	Test terminal (connected to Gnd)
79	MSEL	I	SMCK oscillating frequency designation input (“L” : 4.2336 MHz, “H”: 8.4672 MHz)
80	SSEL	I	SUBQ output mode select (“H”: Q-code buffer mode)

19.3. IC703 (BA5948FPE2) Focus coil/ Tracking coil/ Traverse motor/ Spindle motor driver

No.	Mark	I/O	Function
1	IN2	I	Motor Drive (2) input
2	PC2	I	Turntable motor drive signal (:L”: ON)
3	IN1	I	Motor driver (1) input
4	PC1	I	Spindle motor On/Off
5	NC	-	N.C.
6	NC	-	N.C.
7	NC	I	N.C.
8	NC	-	N.C.
9	PGND1	-	Ground connection (1) for driver
10	PVCC1	I	Power supply (1) for driver
11	D1-	O	Motor driver (1) reverse-action output
12	D1+	O	Motor driver (1) forward-action output
13	D2-	O	Motor driver (2) reverse-action output
14	D2+	O	Motor driver (2) forward-action output
15	D3-	O	Motor driver (3) reverse-action output
16	D3+	O	Motor driver (3) forward-action output
17	D4-	O	Motor driver (4) reverse-action output
18	D4+	O	Motor driver (4) forward-action output
19	PVCC2	I	Power supply (2) for driver
20	PGND2	-	Ground connection (2) for driver
21	NC	-	N.C.
22	NC	-	N.C.
23	NC	-	N.C.
24	NC	-	N.C.
25	VCC	I	Power supply terminal
26	VREF	I	Reference voltage input
27	IN4	I	Motor driver (4) input
28	IN3	I	Motor driver (3) input

19.4. IC600 (C02BBGF000424) Micro Microprocessor

Pin No.	Mark	I/O	Function
1	DECK2	I	DECK2 input
2	N.C.	O	No Connection
3	KEY2	I	Key 2 input
4	KEY1	I	Key 1 input
5	VOL_JOG	I	Volume Jog AD Detection
6	CD\	O	CD unit power control
7	M1_FOUT	O	CHANGER MOTOR 1 FORWARD CONTROL
8	CDRST	O	CD Reset Output
9	STATUS	I	CD Signal Processor Status Input
10	M1_ROUT	O	CHANGER MOTOR 1 REVERSE CONTROL
11	BOTTOM	I	BOTTOM SWITCH
12	ST/DO/SQCK	I/O	Tuner IF Data/Stereo Input/CD Sub Code Clock Output
13	SD	I	Tuner Signal Detect Input
14	SUBQ	I	CD Sub Code Data Input
15	RDS_CLOCK	I	RDS Clock Input (See region setting for detail)s
16	RDS_DATA	I	RDS Data Input (See region setting for details)
17	CNVSS	-	Flash Mode Terminal (Connect To 10K ohm)
18	/RESET	-	Reset Input
19	XCout	-	32.768 kHz Sub Clock
20	XCin	-	32.768 kHz Sub clock
21	VSS	-	Ground (0V)
22	Xin	-	4.19 MHz Main Clock
23	Xout	-	4.19MHz Main Clock
24	VCC	-	Power Supply (+5)
25	MBP1	O	Microcomputer Beat Proof Output 1
26	MBP2	O	Microcomputer Beat Proof Output 2
27	MCLK/ PLLCK	O	CD command Clock Output/Tuner PLL Clock Output
28	MDATA/ PLLDA	O	CD command Data Output/ Tuner PLL Data Output
29	RMT	I	Remote Control Input
30	BLKCK	I	CD Block Clock Input
31	MLD/PLLCE	O	CD Command Load Output/ Tuner PLL Chip Enable
32	SYNC	I	AC Failure Detect Input
33	DCDET	I	DC Detect Input
34	POSITION	I	POSITION SWITCH
35	OPEN	I	OPEN SWITCH
36	M2_FOUT	O	CHANGER MOTOR 2 FORWARD CONTROL
37	M2_ROUT	O	CHANGER MOTOR 2 REVERSE CONTROL
38	STOCK_SW	I	STOCK SWITCH
39	EE_DATA	O	EEPROM DATA
40	REST_SW	I	CD Limit SW Input for the Most Inner Point (Active Low)
41	PCONT	O	Main Transformer Control Output
42	CD_LED	O	LED Drive
43	MOTOR	O	Deck Motor Control Output L=Motor ON, H=Motor OFF
44	MUTEA	O	Audio Mute
45	MUTEH	O	HIC Mute
46	N.C.	O	No Connection
47	REC	O	Record Circuit Control Output L=Record OFF, H= Record ON
48	BP1	O	AM Beatproof 1 Output L=BP1, H=BP2
49	DMT	O	Deck Mute Output L=Mute OFF, H=Mute ON
50	EE_CLK	O	EEPROM CLOCK
51	EE_CS	O	EEPROM Chip Select

Pin No.	Mark	I/O	Function
52	GREEN	O	LED Drive
53	PLUNGER	O	Plunger Control Output L=Plunger ON, H= Plunger OFF
54	RED	O	LED Drive
55	SSEQ	O	SSEQ LED Control
56	N.C.	O	No Connection
57-80	SEG24-SEG1	O	SEGMENT DRIVE OUTPUT (ANODE DRIVE OUTPUT)
81-82	GRID8(REG8) - GRID7(REG7)	O	Digit Drive Output(Grid Drive Output) For region setting/ Function Selection use
83	GRID6	O	Grid Drive Output For region setting/ Function Selection use
84-88	GRID5(REG5) - GRID1(REG1)	O	Digit Drive Output(Grid Drive Output) For region setting/ Function Selection use
89	VEE	-	Power Supply (-30V)
90	REG_IN	I	Region and Function Setting Input
91	VOC_C	O	Karaoke Control C
92	VOC_B	O	Karaoke Control B
93	ASP_ LATCH	O	ASP CONTROL LATCH OUTPUT
94	PLAY_SW	I	PLAY SWITCH
95	ASP_CLK	O	ASP_CLK
96	ASP_DATA	O	ASP_DAT
97	AVss	-	Analog Ground (0V)
98	VREF	-	Reference for A-D
99	PHOTO	I	PHOTO (SG mechanism only)
100	DECK1	I	DECK_AD1

20. Parts Location and Replacement Parts List

Notes:

- Important safety notice:

Components identified by ⚠ mark have special characteristics important for safety.

Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used.

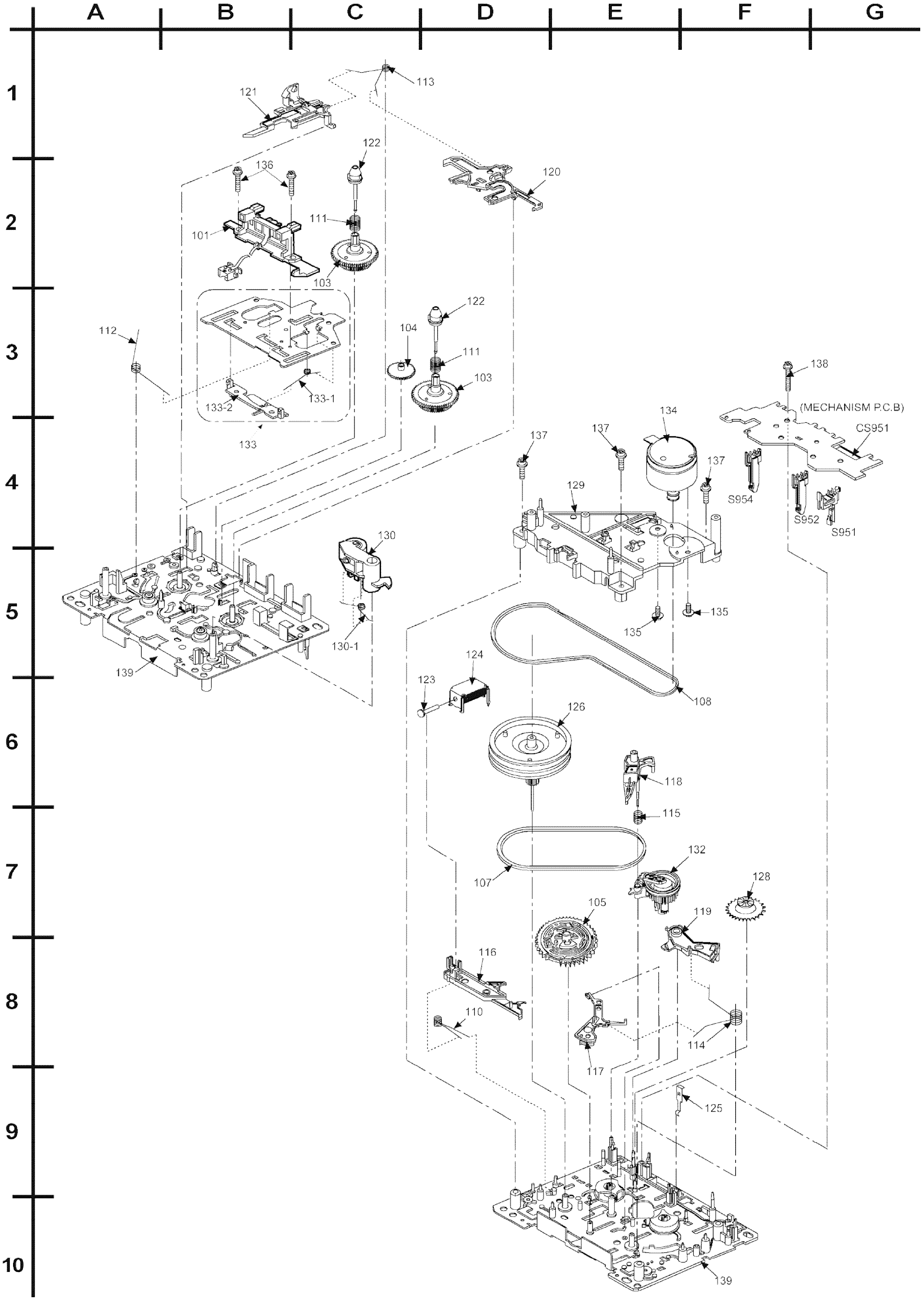
When replacing any of these components, be sure to use only manufacturers's specified parts shown in the parts list.

- **The parenthesized indications in the Remarks column specify the areas or color. (Refer to the cover page for area or color.)**
  Parts without these indications can be used for all areas.
- **Warning: This product uses a laser diode. Refer to caution statements on "Precaution of Laser Diode".**
  ACHTUNG:
- **Die Lasereinheit nicht zerlegen.**
- **Die Lasereinheit darf nur gegen eine vom Hertsteller spezifizierte Einheit ausgetauscht werden.**
- **Capacitor values are in microfarad (µ F) unless specified otherwise, P= Pico-farads(pF); Farads.**
- **Resistance values are in ohms, unless specified otherwise, 1K= 1,000(ohms).**
- **The marking (RTL) indicates that the Retention Time is limited for this item. After the discontinuation of this assembly in production, the item will continue to be available for a specific period of time. The retention period of availability is dependant on the type of assembly, and in accordance with the lows govening part and product retention. After the end of this period, the assembly will no longer be available.**
- **[M] indicates in the Remarks columns indicates parts that are supplied by MESA.**
- **The "(SF)" mark denotes the standard part.**
- **Reference for O/I book languages are as follows :**

Ar : Arabic
Cf : Canadian French
Cz : Czech
Da : Danish
Du : Dutch
En : English
Fr : French
Ge : German
It : Italian
Ko : Korean
Po : Polish
Su : Russian
Sp : Spanish
Sw : Swedish
Co : Traditional Chinese
Cn : Simplified Chinese

20.1. Deck Mechanism (RAA4402-S)

20.1.1. Deck Mechanism Parts Location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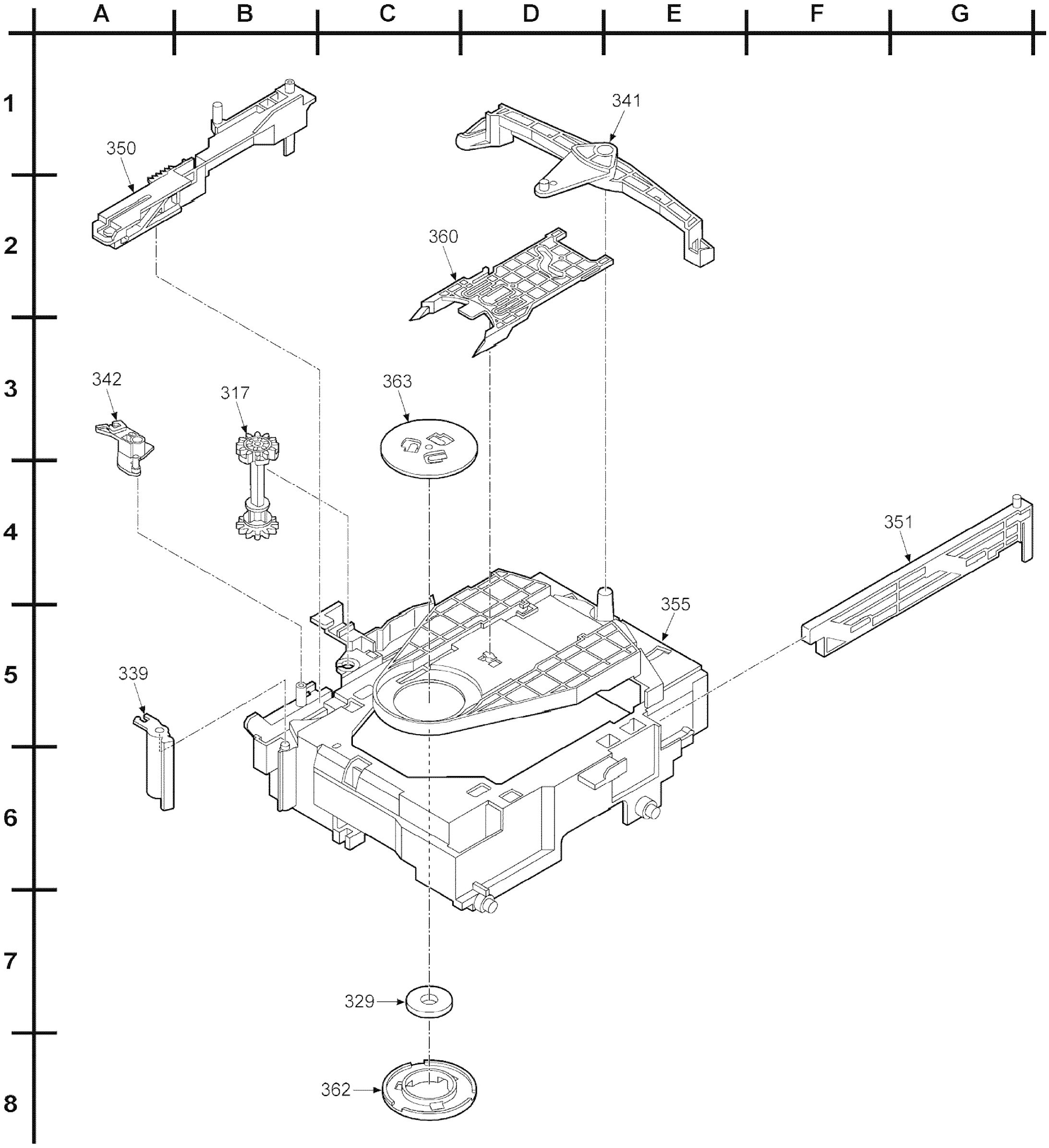
20.1.2. Deck Mechanism Parts List

Ref. No.	Part No.	Part Name & Description	Remarks
		CASSETTE DECK	
101	RED0067	R/P HEAD BLOCK UNIT	[M]
103	RDG0300	REEL BASE GEAR	[M]
104	RDG0301	WINDING RELAY GEAR	[M]
105	RDK0026	MAIN GEAR	[M]
107	RDV0033-4	WINDING BELT	[M]
108	RDV0064	CAPSTAN BELT	[M]
110	RMB0312	TRIGGER LEVER SPRING	[M]
111	RMB0400	REEL SPRING	[M]
112	RMB0403	HEAB PANEL SPRING	[M]
113	RMB0404	BRAKE ROD SPRING	[M]
114	RMB0406	FR LEVER SPRING	[M]
115	RMB0408	THRUST SPRING	[M]
116	RML0370	TRIGGER LEVER	[M]
117	RML0371	FR LEVER	[M]
118	RML0372	WINDING LEVER	[M]
119	RML0374	EJECT LEVER	[M]
120	RMM0131	BRAKE ROD	[M]
121	RMM0133	EJECT ROD	[M]
122	RMQ0519	REEL HUB	[M]
123	RMS0398-1	MOVING CORE	[M]
124	RXQ0470	PLUNGER	[M]
125	RMC0061	PACK SPRING	[M]
126	RXF0061	FLYWHEEL F ASS’Y	[M]
128	RXG0040	FF RELAY GEAR ASS’Y	[M]
129	RMK0283A-J	SUB-CHASSIS	[M]
130	RXL0124	PINCH ROLLER F ASS’Y	[M]
130-1	RMB0401	PINCH ARM SPRING F	[M]
132	RXL0126	WINDING ARM ASS’Y	[M]
133	RXQ0412	HEAD PANEL ASS’Y	[M]
133-1	RMB0405	FR ROD SPRING	[M]
133-2	RMM0132	FR ROD	[M]
134	REM0098	CAP MOTOR ASS’Y	[M]
135	RHD26022	MOTOR SCREW	[M]
136	XTW2+5L	HEAD BLOCK UNIT SCRE	[M]
137	XTW26+10S	SUB-CHASSIS SCREW	[M]
138	XYC2+JF17	PCB EARTH SCREW	[M]
139	RFKJSTR280PP	CHASSIS ASS’Y	[M]

20.2. CD Loading Mechanism

20.2.1. CD Loading Mechanism Parts Location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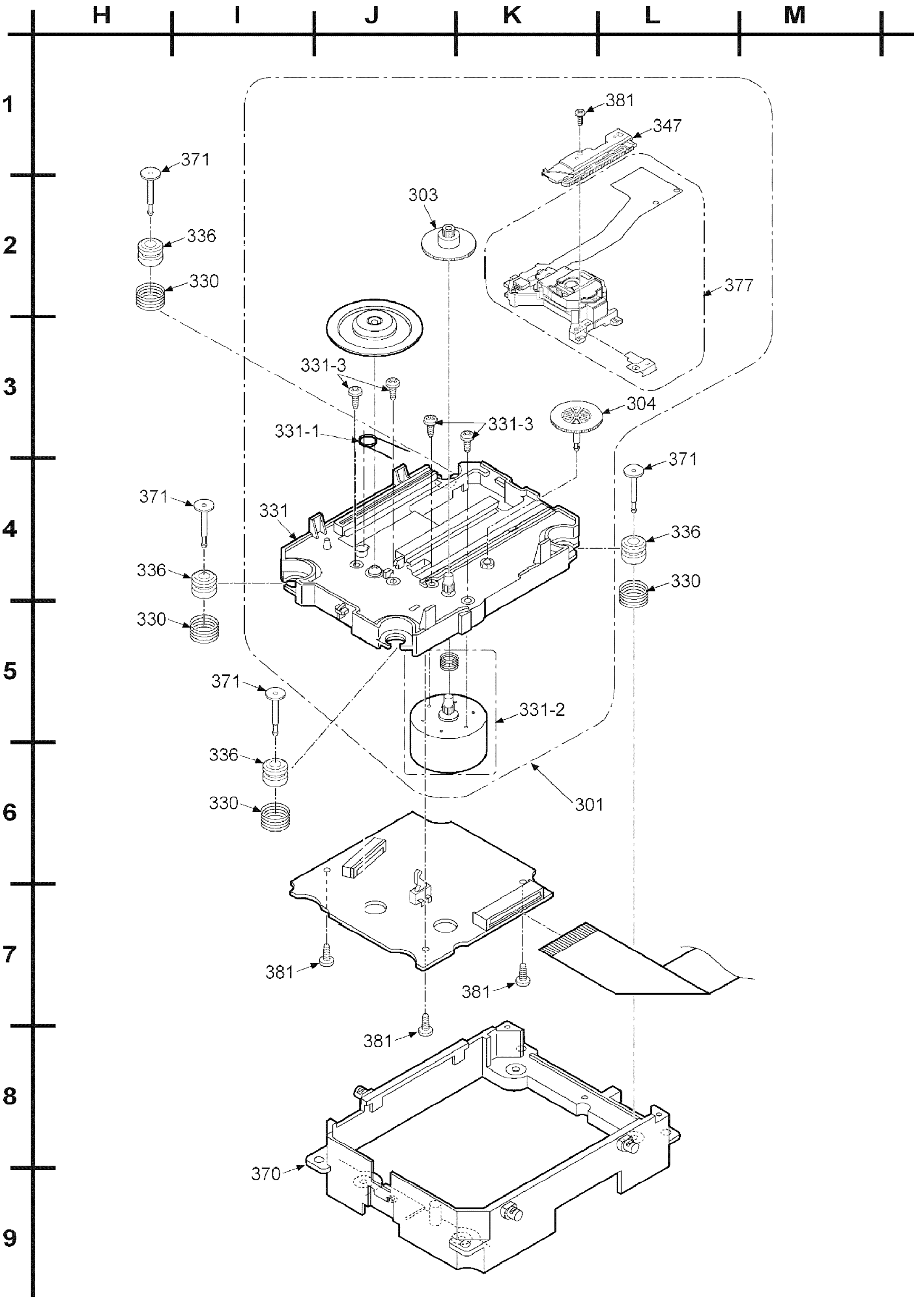
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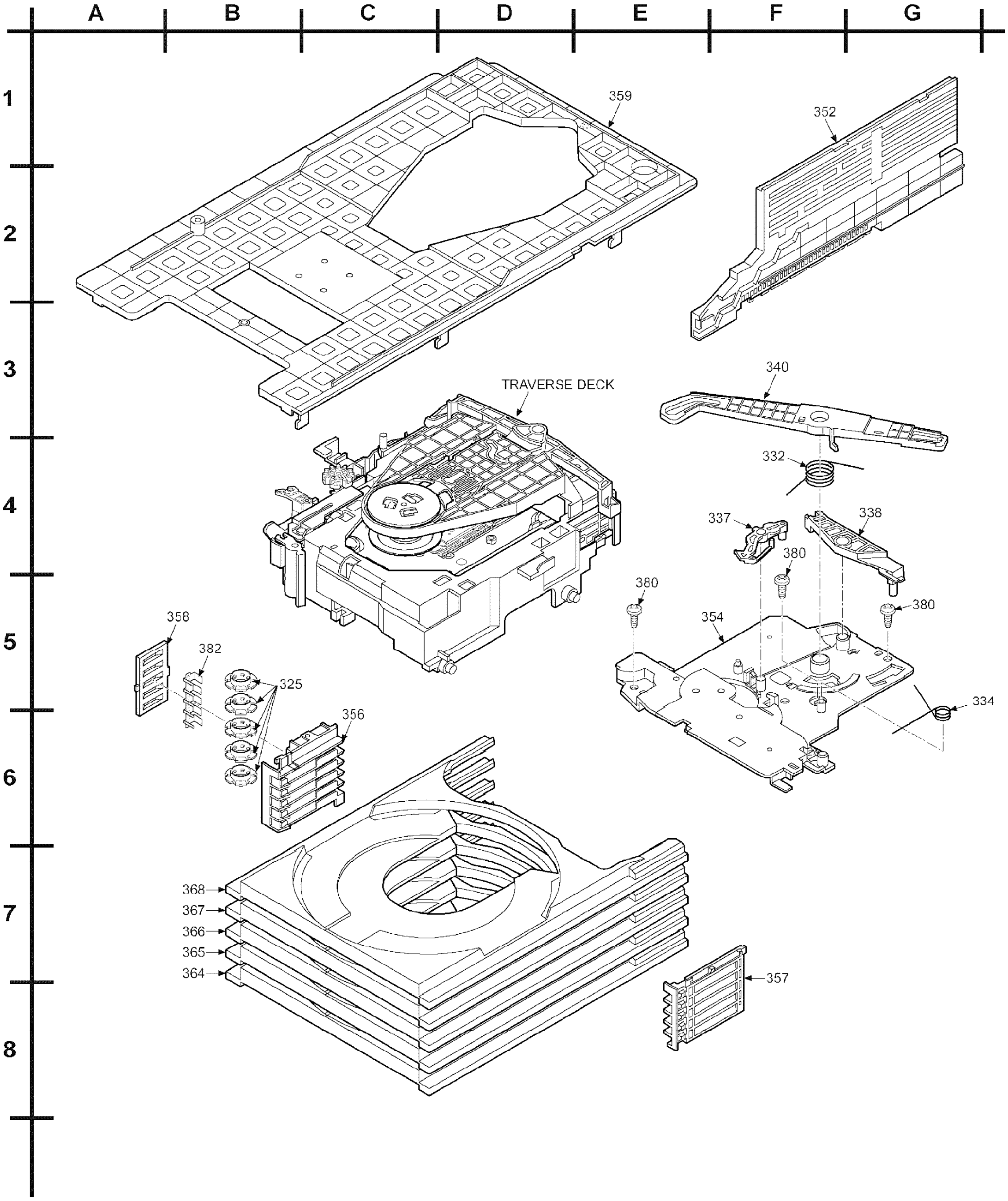
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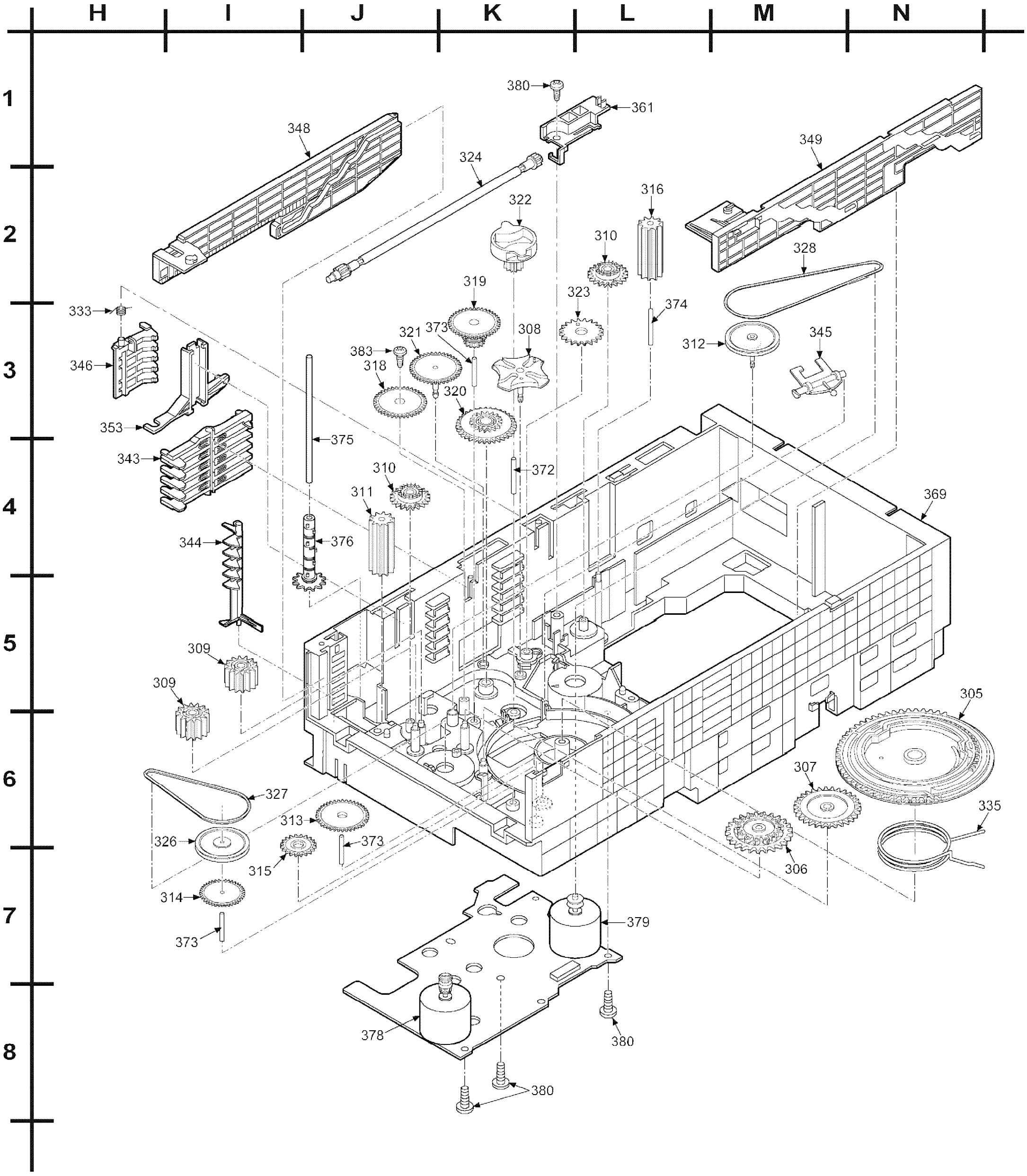
TRAVERSE DECK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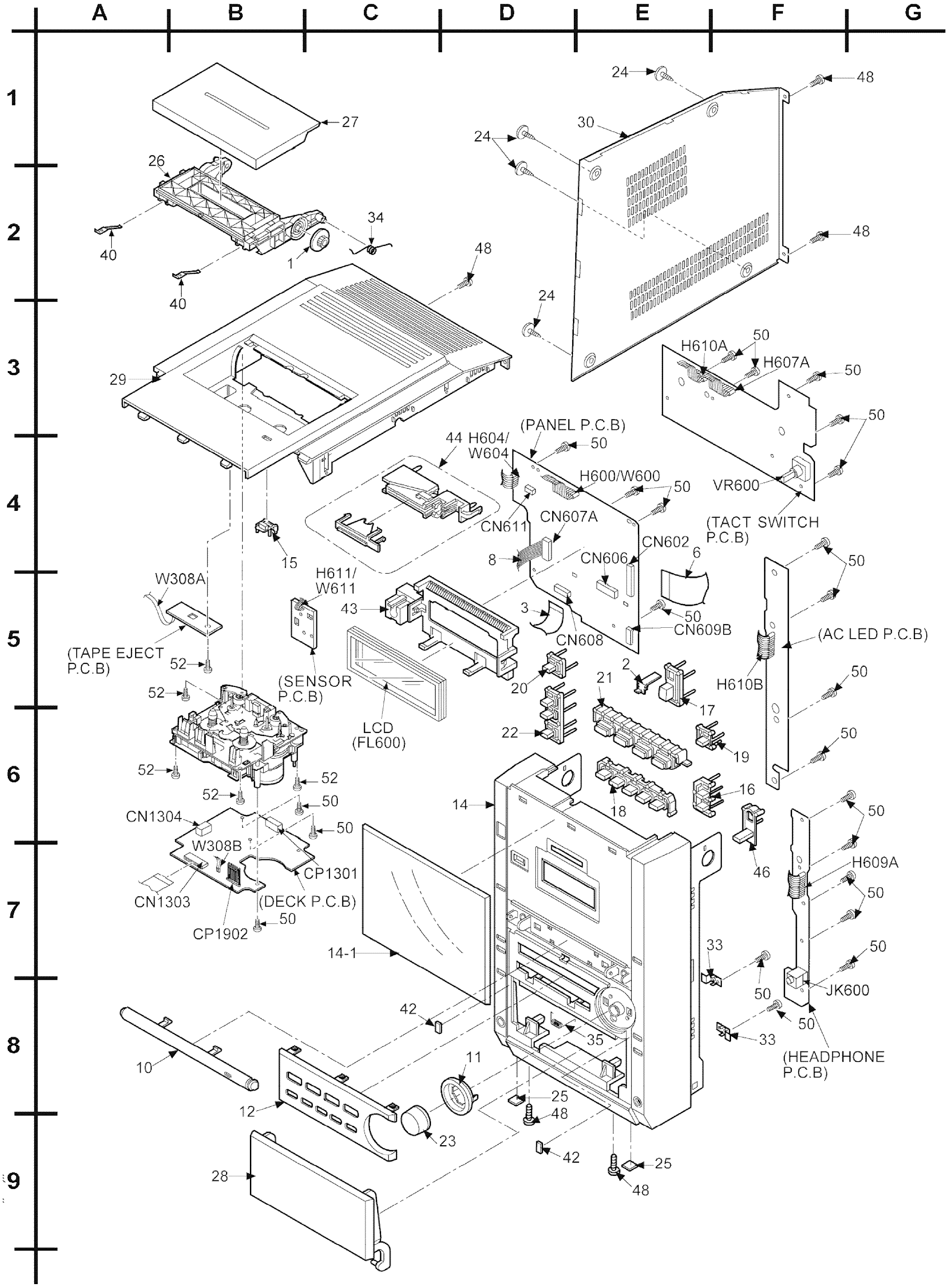
20.2.2. CD Loading Mechanism Parts List

Ref. No.	Part No.	Part Name & Description	Remarks
		TRAVERSE DECK	
301	RAE0157A-V	TRV UNIT WITHOUT SERVO	[M]
303	RDG0455	TRV GEAR (A)	[M]
304	RDG0456	TRV GEAR (B)	[M]
305	RDG0519	MAIN GEAR	[M]
306	RDG0520	SPEED UP GEAR	[M]
307	RDG0521	REVERSE GEAR	[M]
308	RDG0522	GENEVA GEAR	[M]
309	RDG0523	HOR RELAY GEAR	[M]
310	RDG0525	CROWN GEAR	[M]
311	RDG0526	TRAY RELAY GEAR	[M]
312	RDG0527	UD PULLEY GEAR	[M]
313	RDG0528	HOR SPEED DOWN GEAR	[M]
314	RDG0529	HOR SPEED DOWN GEAR	[M]
315	RDG0530	HOR DRIVE GEAR	[M]
316	RDG0531	LOAD RELAY GEAR	[M]
317	RDG0532	LOAD GEAR	[M]
318	RDG0534	UD SPEED DOWN GEAR	[M]
319	RDG0535	UD SPEED DOWN GEAR	[M]
320	RDG0536	SELECT SPEED DOWN GE	[M]
321	RDG0537	SELECT DRIVE GEAR	[M]
322	RDG0538	CHANGE GEAR	[M]
323	RDG0539	UD DRIVE GEAR	[M]
324	RDG0540	TIMING GEAR	[M]
325	RDG0542	TRAY GEAR	[M]
326	RDG0543	HOR PULLEY GEAR	[M]
327	RDV0068	HOR BELT	[M]
328	RDV0069	UD BELT	[M]
329	RHM0001	MAGNET	[M]
330	RME0109	FLOATING SPRING	[M]
331	RFKNCT101	TRAVERSE UNIT ASS’Y	[M]
331-1	RME0369	PRESS SPRING	[M]
331-2	RXQ0632	TRV MOTOR UNIT	[M]
331-3	XQN17+C28F	SCREW	[M]
332	RME0344	UD ASSIST SPRING	[M]
333	RME0361	TRAY STOPPER SPRING	[M]
334	RME0363	LIMIT SPRING	[M]
335	RME0368	MAIN GEAR SPRING	[M]
336	RMG0563-T	FLOATING RUBBER	[M]
337	RML0616	SPEED UP LOCK	[M]
338	RML0617	SEPARATE LEVER 1	[M]
339	RML0618	SEPARATE LEVER 2	[M]
340	RML0619-1	UD. CONNECTION LEVER	[M]
341	RML0620	TRV.CONNECT LEVER	[M]
342	RML0621	TRAY CHG. LEVER	[M]
343	RML0622	TRAY LOCK LEVER	[M]
344	RML0623	OPEN SW. LEVER	[M]
345	RML0624	CHANGE LEVER	[M]
346	RML0637	TRAY STOPPER	[M]
347	RMM0218	TRAVERSE DRIVE RACK	[M]
348	RMM0239	UD.RACK [L]	[M]
349	RMM0240	UD.RACK [R]	[M]
350	RMM0241	TRV.SLIDE PLATE [L]	[M]
351	RMM0242	TRV.SLIDE PLATE [R]	[M]
352	RMM0243	SELECT RACK	[M]
353	RMM0244	SELECT GUIDE	[M]
354	RMQ1051	PITCH PLATE	[M]
355	RMQ1052	UD BASE	[M]
356	RMQ1056	TRAY GUIDE [L]	[M]
357	RMQ1057	TRAY GUIDE [R]	[M]
358	RMQ1058	GEAR HOLDER	[M]
359	RMQ1059	TOP COVER	[M]
360	RMQ1060	CLAMP GUIDE	[M]
361	RMQ1061	TG.PLATE	[M]
362	RMR0334	FIXTURE	[M]
363	RMR0624-W5	CLAMPER	[M]
364	RMR1407A-H1	TRAY NO. 1	[M]
365	RMR1407B-H1	TRAY NO. 2	[M]
366	RMR1407C-H1	TRAY NO. 3	[M]
367	RMR1407D-H1	TRAY NO. 4	[M]
368	RMR1407E-H1	TRAY NO. 5	[M]
369	RMR1408-K	MECHA BASE	[M]
370	RMR1427-X	MIDDLE CHASSIS	[M]
371	RMS0757-1	FIXED PIN	[M]
372	RMS0758	CHANGE GEAR SHAFT	[M]
373	RMS0759	UD SPEED DOWN GEAR	[M]
374	RMS0760	LOAD RELAY GEAR SHAFT	[M]
375	RMS0762	TRAY GEAR SHAFT	[M]
376	RXG0053	TRAY DRIVE GEAR ASSY	[M]
377	RXQ0999	OPU UNIT	[M]
378	RXQ0803	LOADING MOTOR ASS’Y	[M]
379	RXQ0804	UD MOTOR ASS’Y	[M]
380	XTB3+10J	SCREW	[M]
381	XTN2+6G	SCREW	[M]
382	RMC0472	TRAY SPRING	[M]
383	XTBS26+8J	SCREW	[M]

20.3. Cabinet & CD Loading Mechanism

20.3.1. Cabinet & CD Loading Mechanism Parts Location



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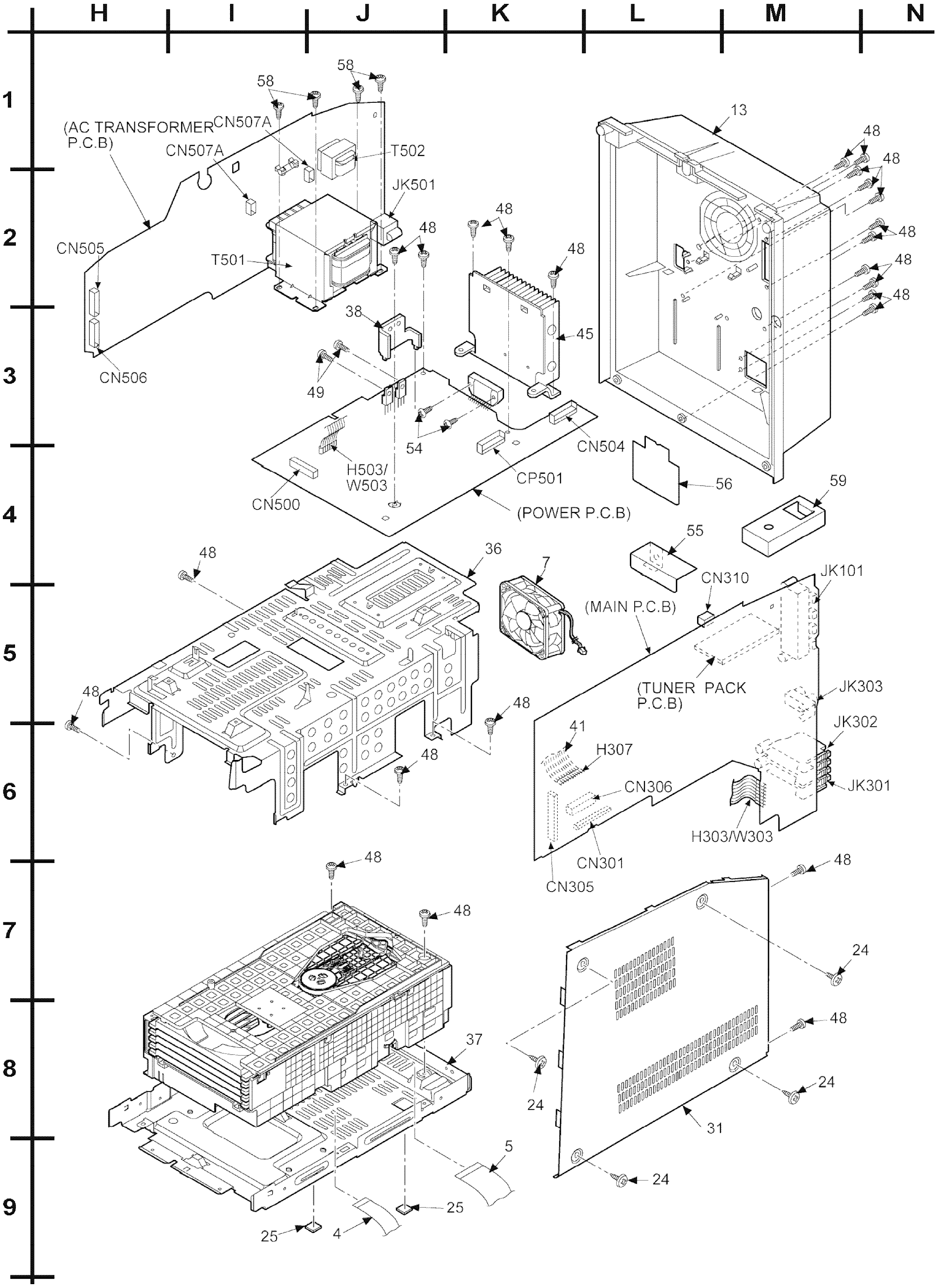
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20.3.2. Cabinet & CD Loading Mechanism Parts List

Ref. No.	Part No.	Part Name & Description	Remarks
		CABINET AND CHASSIS	
1	RDG0357	DAMPER GEAR	[M]
2	RDLX0003-Q	POWER LENS	[M]
3	REEX0165	14P FFC	[M]
4	REEX0166	14P FFC WIRE	[M]
5	REEX0167	19P CD FFC	[M]
6	REEX0282	30P FFC	[M]
7	REM0094	COOLING FAN	[M]
8	REXX0294	12P (BTN PCB-PANEL)	[M]
10	RGKX0173-S	JOG ORNAMENT	[M]
11	RGKX0175-S	VOLUME ORNAMENT	[M]
12	RGKX0189-S	CENTER ORNAMENT	[M]
13	RKSX0050B-H	REAR CABINET	[M]E
13	RKSX0050C-H	REAR CABINET	[M]EB
13	RKSX0050P-H	REAR CABINET	[M]EG
14	RFKGAPM18EBS	FRONT CABINET ASS'Y	[M]
14-1	RGPX0097A-S	FL WINDOW	[M]
15	RGUX0497-S	DECK EJECT BUTTON	[M]
16	RGUX0498-S	CD EJECT BUTTON	[M]
17	RGUX0499-S	POWER BUTTON	[M]
18	RGUX0500-S	ALL DISC BUTTON	[M]
19	RGUX0501-S	RECORD BUTTON	[M]
20	RGUX0502-S	AUX BUTTON	[M]
21	RGUX0504-S	FUNCTION BUTTON	[M]
22	RGUX0505-S	CD MANAGER BUTTON	[M]
23	RGWX0075-S	VOLUME KNOB	[M]
24	RHD30007-1S	SCREW	[M]
25	RHGV0008	LEG CUSHION	[M]
26	RKF0479-1H	CASS HOLDER	[M]
27	RKFX0106-S	CASS LID	[M]
28	RKFX0107-S	CD LID	[M]
29	RKMX0083-S	TOP CABINET	[M]
30	RKMX0084-S	SIDE PANEL (LEFT)	[M]
31	RKMX0085-S	SIDE PANEL [RIGHT)	[M]
33	RMA1543	CD LID SUPPORT	[M]
34	RMBX0029	CASS OPEN SPRING	[M]
35	RMEX0020	CD LID OPEN SPRING	[M]
36	RMKX0070	INNER CHASSIS	[M]
37	RMKX0071	BOTTOM CHASSIS	[M]
38	RMY0260	HEAT SINK (SMALL)	[M]
40	RUS757ZAA	CASS HALF SPRING	[M]
41	RWJ1109180XX	9P MAIN TO DECK	[M]
43	RMNX0094-1	FL HOLDER	[M]
44	RXQX0014	REC. LIGHTING HOLDER	[M]
45	RXXX0043	HEAT SINK UNIT	[M]
46	RYQX0083-S	S. SEQ UNIT	[M]
48	XTB3+10JFZ	SCREW	[M]
49	XTB3+8JFZ	SCREW	[M]
50	XTBS26+10J	SCREW	[M]
52	XTV3+10G	SCREW	[M]
54	XTW3+15T	SCREW	[M]
55	RSC0669	SP EARTH	[M]
56	RSCX0079-1	REAR SHIELD PLATE	[M]
58	XTWS3+6T	SCREW	[M]
59	ENV17290G1Y	FM TUNER PACK	[M]

20.4. Components Parts List

Ref. No.	Part No.	Part Name & Description	Remarks
		PRINTED CIRCUIT BOARD	
	REPX0362A	CD SERVO P.C.B.	[M](RTL)
	REPX0349B	MAIN P.C.B.	[M](RTL)
	REPX0349B	PANEL P.C.B.	[M](RTL)
	REPX0350A	DECK P.C.B.	[M](RTL)
	REPX0321H	DECK MECHANISM P.C.B.	[M](RTL)
	REPX0348B	POWER P.C.B.	[M](RTL)E/EG
	REPX0348D	POWER P.C.B.	[M](RTL)EB
	REPX0348B	AC TRANSFORMER P.C.B.	[M](RTL)E/EG
	REPX0348D	AC TRANSFORMER P.C.B.	[M](RTL)EB
	REPX0349B	TACT SWITCH P.C.B.	[M](RTL)
	REPX0349B	AC LED P.C.B.	[M](RTL)
	REPX0349B	HEADPHONE P.C.B.	[M](RTL)
	REPX0349B	SENSOR P.C.B.	[M](RTL)
	REPX0350A	TAPE EJECT P.C.B.	[M](RTL)
	REP3340A	CD LOADING P.C.B.	[M](RTL)
		INTEGRATED CIRCUITS	
IC11	C0GAG0000007	IC DRIVER	[M]
IC21	C0GAG0000007	IC DRIVER	[M]
IC101	LA1833NMNTLM	IC IF & MPX	[M]
IC102	LC72131MDTRM	IC PLL	[M]
IC301	C1BB00000617	IC	[M]
IC302	C1BB00000715	IC RDS	[M]
IC500	RSN314H41A-P	IC POWER AMP HIC	[M]
IC501	C0AABB000117	IC OP-AMP (HP AMP)	[M]
IC600	C2BBGF000424	IC MICROPROCESSOR	[M]
IC701	AN22004A-NF	IC HEAD AMP	[M]
IC702	MN662790RSC	IC LSI	[M]
IC703	BA5948FPE2	IC 4 CH DRIVE	[M]
IC971	CNB13030R2AU	IC PHOTO INTERUPTOR	[M]
IC1000	C1AA00000612	IC ANALOG SW	[M]
IC1001	AN7326K	IC DECK R/P	[M]
		TRANSISTORS	
Q1	B3NAA0000068	TRANSISTOR	[M]
Q101	2SC2058SPTA	TRANSISTOR	[M]
Q102	2SC2058SPTA	TRANSISTOR	[M]
Q106	KRA102MTA	TRANSISTOR	[M]
Q110	2SC3311ARTA	TRANSISTOR	[M]
Q500	KTA1046	TRANSISTOR	[M]
Q501	KTC2026	TRANSISTOR	[M]
Q502	KTA1046	TRANSISTOR	[M]
Q503	KTA12710YTA	TRANSISTOR	[M]
Q505	KTA1267GRTA	TRANSISTOR	[M]
Q506	KTA1046	TRANSISTOR	[M]
Q507	KTC3199GRTA	TRANSISTOR	[M]
Q508	KTC3199GRTA	TRANSISTOR	[M]
Q509	KRA110MTA	TRANSISTOR	[M]
Q510	KRA110MTA	TRANSISTOR	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
Q514	**2SD0592ARA**	**TRANSISTOR**	**[M]**
Q515	**KTC3199GRTA**	**TRANSISTOR**	**[M]**
Q516	**KTC3199GRTA**	**TRANSISTOR**	**[M]**
Q517	**KTC32030YTA**	**TRANSISTOR**	**[M]**
Q519	**B1AAGC000006**	**TRANSISTOR**	**[M]**
Q575	**B1AAGC000006**	**TRANSISTOR**	**[M]**
Q577	**2SC3940ARA**	**TRANSISTOR**	**[M]**
Q578	**KRC102MTA**	**TRANSISTOR**	**[M]**
Q579	**2SB0621AHA**	**TRANSISTOR**	**[M]**
Q607	**KRC103STA**	**TRANSISTOR**	**[M]**
Q608	**KTC3875GRTA**	**TRANSISTOR**	**[M]**
Q609	**KTC3875GRTA**	**TRANSISTOR**	**[M]**
Q610	**KTA1504GRTA**	**TRANSISTOR**	**[M]**
Q611	**KRC102STA**	**TRANSISTOR**	**[M]**
Q613	**KRC119STA**	**TRANSISTOR**	**[M]**
Q614	**KRC119STA**	**TRANSISTOR**	**[M]**
Q615	**KRC119STA**	**TRANSISTOR**	**[M]**
Q700	**B1AACF000063**	**TRANSISTOR**	**[M]**
Q701	**2SA1037AKSTX**	**TRANSISTOR**	**[M]**
Q701	**KTA12710YTA**	**TRANSISTOR**	**[M]**
Q702	**B1AACF000063**	**TRANSISTOR**	**[M]**
Q703	**B1AACF000063**	**TRANSISTOR**	**[M]**
Q704	**KRA110MTA**	**TRANSISTOR**	**[M]**
Q710	**B1AAGC000006**	**TRANSISTOR**	**[M]**
Q711	**B1AAGC000006**	**TRANSISTOR**	**[M]**
Q714	**KTC3199GRTA**	**TRANSISTOR**	**[M]**
Q715	**KTC3199GRTA**	**TRANSISTOR**	**[M]**
Q716	**KTC3199GRTA**	**TRANSISTOR**	**[M]**
Q717	**KTC3199GRTA**	**TRANSISTOR**	**[M]**
Q718	**B1AAGC000006**	**TRANSISTOR**	**[M]**
Q719	**B1AAGC000006**	**TRANSISTOR**	**[M]**
Q720	**KTC3199GRTA**	**TRANSISTOR**	**[M]**
Q721	**KTC3199GRTA**	**TRANSISTOR**	**[M]**
Q901	**KRC101STA**	**TRANSISTOR**	**[M]**
Q902	**KRC101STA**	**TRANSISTOR**	**[M]**
Q903	**KRC101STA**	**TRANSISTOR**	**[M]**
Q904	**KRC101STA**	**TRANSISTOR**	**[M]**
Q905	**KRC101STA**	**TRANSISTOR**	**[M]**
Q1000	**KTC3199GRTA**	**TRANSISTOR**	**[M]**
Q1101	**B1ABGC000005**	**TRANSISTOR**	**[M]**
Q1201	**B1ABGC000005**	**TRANSISTOR**	**[M]**
Q1302	**DTA114EKA146**	**TRANSISTOR**	**[M]**
Q1303	**DTC143XKA146**	**TRANSISTOR**	**[M]**
Q1304	**DTA143XKA146**	**TRANSISTOR**	**[M]**
Q1305	**DTC114EKA146**	**TRANSISTOR**	**[M]**
Q1309	**B1AAGC000006**	**TRANSISTOR**	**[M]**
Q1310	**B1AAGC000006**	**TRANSISTOR**	**[M]**
Q1312	**2SC2412KT96R**	**TRANSISTOR**	**[M]**
Q1313	**2SC2784FTA**	**TRANSISTOR**	**[M]**
Q1314	**DTA143XKA146**	**TRANSISTOR**	**[M]**
Q1315	**KTA12710YTA**	**TRANSISTOR**	**[M]**
Q1316	**2SD09650RA**	**TRANSISTOR**	**[M]**
Q1317	**B1ABGC000005**	**TRANSISTOR**	**[M]**
		DIODES	
D101	**UDZSTE175R1B**	**DIODE**	**[M]**

Ref. No.	Part No.	Part Name & Description	Remarks
D301	RL1N4003N02	DIODE	[M]
D302	RL1N4003N02	DIODE	[M]
D500	KBL402G	DIODE	[M]
D501	B0ACCK000005	DIODE	[M]
D502	UDZSTE177R5B	DIODE	[M]
D505	B0AACK000004	DIODE	[M]
D508	MAZ4150NLF	DIODE	[M]
D515	B0BA9R600002	DIODE	[M]
D517	B0BA5R600016	DIODE	[M]
D518	B0AACK000004	DIODE	[M]
D520	B0BA9R600002	DIODE	[M]
D524	MAZ4150NMF	DIODE	[M]
D525	B0AACK000004	DIODE	[M]
D526	B0AACK000004	DIODE	[M]
D527	B0AACK000004	DIODE	[M]
D528	B0AACK000004	DIODE	[M]
D530	B0AACK000004	DIODE	[M]
D539	RL1N4003N02	DIODE	[M]
D540	RL1N4003N02	DIODE	[M]
D541	RL1N4003N02	DIODE	[M]
D578	RL1N4003N02	DIODE	[M]
D579	RL1N4003N02	DIODE	[M]
D580	RL1N4003N02	DIODE	[M]
D581	RL1N4003N02	DIODE	[M]
D582	B0BA6R600008	DIODE	[M]
D584	RL1N4003N02	DIODE	[M]
D585	RL1N4003N02	DIODE	[M]
D586	RL1N4003N02	DIODE	[M]
D587	RL1N4003N02	DIODE	[M]
D588	RL1N4003N02	DIODE	[M]
D589	RL1N4003N02	DIODE	[M]
D592	RL1N4003N02	DIODE	[M]
D593	RL1N4003N02	DIODE	[M]
D594	MTZJ24CTA	DIODE	[M]
D601	B0ACCK000005	DIODE	[M]
D608	B0ACCK000005	DIODE	[M]
D620	1SS380TE-17	DIODE	[M]
D621	1SS380TE-17	DIODE	[M]
D630	B0ACCK000005	DIODE	[M]
D631	B0ACCK000005	DIODE	[M]
D632	UDZSTE174R7B	DIODE	[M]
D633	B3AAA0000583	DIODE	[M]
D636	B3CNE0000001	DIODE	[M]
D637	B3CNE0000001	DIODE	[M]
D638	LNJ801TPSJA	DIODE	[M]
D640	RB501V-40	DIODE	[M]
D641	RB501V-40	DIODE	[M]
D642	RB501V-40	DIODE	[M]
D643	RB501V-40	DIODE	[M]
D644	B0ACCK000005	DIODE	[M]
D645	B0ACCK000005	DIODE	[M]
D650	B0ACCK000005	DIODE	[M]
D700	B0AACK000004	DIODE	[M]
D701	B0AACK000004	DIODE	[M]
D702	B0AACK000004	DIODE	[M]
D703	B0AACK000004	DIODE	[M]
D704	B0AACK000004	DIODE	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
D705	B0AACK000004	DIODE	[M]
D706	B0AACK000004	DIODE	[M]
D707	B0AACK000004	DIODE	[M]
D708	MA2C16500E	DIODE	[M]
D709	MA2C16500E	DIODE	[M]
D743	B0EAKM000085	DIODE	[M]
D750	MAZ80560ML	DIODE	[M]
D971	MA2C16500E	DIODE	[M]
D1301	B0ACCK000005	DIODE	[M]
		VARIABLE RESISTORS	
VR600	EVEJ1CF2524B	VOLUME ENCODER	[M]
		SWITCHES	
S1	K0L1BA000065	SW	[M]
S2	K0L1BA000065	SW	[M]
S3	K0L1BA000070	SW	[M]
S4	RSH1A045-1A	SW TRIGGER	[M]
S600	EVQ21405RJ	SW REC	[M]
S602	EVQ21405RJ	SW TAPE EJECT	[M]
S603	EVQ21405RJ	SW REW	[M]
S604	EVQ21405RJ	SW DEMO/STOP	[M]
S605	EVQ21405RJ	SW FF	[M]
S606	EVQ21405RJ	SW CD PLAY/PAUSE	[M]
S607	EVQ21405RJ	SW TAPE	[M]
S608	EVQ21405RJ	SW TUNER/BAND	[M]
S609	EVQ21405RJ	SW AUX	[M]
S610	EVQ21405RJ	SW CD OPEN/CLOSE	[M]
S611	EVQ21405RJ	SW CD CHANGE	[M]
S612	EVQ21405RJ	SW CD CHECK	[M]
S613	EVQ21405RJ	SW CD 5	[M]
S614	EVQ21405RJ	SW CD 4	[M]
S615	EVQ21405RJ	SW CD 3	[M]
S616	EVQ21405RJ	SW CD 2	[M]
S617	EVQ21405RJ	SW CD 1	[M]
S618	EVQ21405RJ	SW POWER	[M]
S619	EVQ21405RJ	SW SSEQ	[M]
S701	RSH1A048-A	SW RESET	[M]
S780	RSH1A049-U	SW OPEN	[M]
S971	RSH1A018-3U	S WMODE	[M]
S972	RSH1A019-2U	SW LEAF	[M]
S973	RSH1A019-2U	SW LEAF	[M]
S975	RSH1A019-2U	SW LEAF	[M]
		CONNECTORS	
CN1	K1MN14B00066	14P FFC CONN. (SIDE)	[M]
CN301	RJU100W13	13P B2B CONNECTOR	[M]
CN305	RJS2A4230-F	30P FFC CONNECTOR	[M]
CN306	K1MN14C00004	14P FFC CONNECTOR	[M]
CN310	K1KA02A00008	FAN CONNECTOR	[M]
CN500	K1MN14A00049	14P FFC CONNECTOR	[M]
CN504	RJT119W08V	8P CONNECTOR	[M]
CN505	K1KB07A00016	7P CONNECTOR	[M]
CN506	RJT119W06V	6P CONNECTOR	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
CN507A	REXX0320	2P STANDBY WIRE	[M]
CN602	RJS2A4230-F	30P FFC CONNECTOR	[M]
CN606	K1MN19C00001	19P FFC CONN	[M]
CN607A	K1KA12B00095	12P CONNECTOR	[M]
CN608	K1MN14B00058	14P FFC CONNECTOR	[M]
CN609B	K1KA09B00064	CONNECTOR	[M]
CN611	K1KA03A00086	3P CONNECTOR	[M]
CN701	RJS2A8616	16P FPC CONNECTOR	[M]
CN702	RJS1A9319	19P FFC CONNECTOR	[M]
CN1303	RJS1A5711	11P CONNECTOR	[M]
CN1304	RJS1A5709	9P CONNECTOR	[M]
CP501	RJT100W13	13P BTB CONNECTOR	[M]
CP1301	RJS1A6805-J	CONNECTOR	[M]
CP1902	K1KA09B00058	CONNECTOR	[M]
CS971	RJU071H09M1	CONNECTOR	[M]
		COILS & TRANSFORMERS	
L101	RLQBR39KT-1Y	COIL	[M]
L102	RLQBR39KT-1Y	COIL	[M]
L112	G0A200D00002	RF CHOKE COIL	[M]
L201	G0C100JA0027	COIL	[M]
L220	RLQZR73MT-T	CHOKE COIL	[M]
L221	RLQZR73MT-T	CHOKE COIL	[M]
L391	RLQB101JTD-D	INDUCTOR	[M]
L392	RLQB101JTD-D	INDUCTOR	[M]
L420	RLQZR73MT-T	CHOKE COIL	[M]
L421	RLQZR73MT-T	CHOKE COIL	[M]
L503	RLQZ371	CHOKE COIL	[M] ⚠
L600	G0A200D00002	RF CHOKE COIL	[M]
L601	G0C100JA0027	COIL	[M]
L602	G0A200D00002	RF CHOKE COIL	[M]
L603	G0C3R3JA0027	COIL	[M]
L605	G0C101JA0027	COIL	[M]
L1301	7L1A62N	BIAS OCS COIL	[M]
L1302	RLQB470JTD-D	RF CHOKE COIL	[M]
T501	G4C6ACH00003	POWER TRANSFORMER	[M] ⚠
T502	RTP1H3E002	BACK-UP TRANSFORMER	[M] ⚠
		COMPONENT COMBINATION	
Z101	RLA2Z007-T	COIL	[M]
Z102	RLI2Z021M-T	AM IF BLOCK	[M]
Z501	ERZV10V511CS	ZENER	[M] ⚠
Z602	B3RAB0000012	REMOTE SENSOR	[M]
		CERAMIC FILTERS	
CF201	J0B1075A0086	CERAMIC CAPACITOR	[M]
CF202	J0B1075A0077	CERAMIC FILTER	[M]
		RELAY	

Ref. No.	Part No.	Part Name & Description	Remarks
RL501	RSY0040M-0	POWER RELAY	[M] ⚠
		OSCILLATORS	
X102	RLFDFT22DD	CRYSTAL OSCILLATOR	[M]
X103	H0H720400005	CRYSTAL OSCILLATOR	[M]
X391	H0H433400001	CRYSTAL OSCILLATOR	[M]
X600	RSXZ4M19B01T	CERAMIC OSCILLATOR	[M]
X601	RSXD32K7S02	CRYSTAL OSCILLATOR	[M]
X701	H2A169500009	CERAMIC OSCILLATOR	[M]
		DISPLAY TUBE	
FL600	A2BD00000052	FL DISPLAY	[M]
		FUSES	
F1	K5Y630B00001	FUSE	[M] ⚠
		FUSE HOLDERS	
FC1	EYF52BC	FUSE HOLDER	[M]
FC2	EYF52BC	FUSE HOLDER	[M]
		FUSE PROTECTOR	
FP501	K5G402AA0003	FUSE PROTECTOR	[M] ⚠
FP502	K5G102AA0003	FUSE PROTECTOR	[M] ⚠
		HOLDERS	
H303	K1YF08000003	8P WIRE HOLDER	[M]
H307	RMR0318	9P WIRE HOLDER	[M]
H503	K1YF06000002	6P WIRE HOLDER	[M]
H600	RMR0320	11P WIRE HOLDER	[M]
H604	RMR0316	7P WIRE HOLDER	[M]
H607A	RMR0321	12P WIRE HOLDER	[M]
H609A	RMR0318	9P WIRE HOLDER	[M]
H610A	RMR0316	7P WIRE HOLDER	[M]
H610B	RMR0316	7P WIRE HOLDER	[M]
H611	RMR0312	3P CABLE HOLDER	[M]
		JACKS	
JK101	RJH8304N	JK ANTENNA	[M]
JK301	K4BC04B00036	JK RED/BLACK SPEAKER	[M]
JK302	K4BC04B00037	JK BLUE/GRAY SPEAKER	[M]
JK303	RJH2213N-1	JK AUX IN	[M]
JK501	K2AA2B000004	JK AC INLET	[M] ⚠
JK600	RJJ37TK07-X	JK HEADPHONE	[M]
		EARTH TERMINAL	
E501	SNE1004-2	EARTH TERMINAL	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
		WIRES	
W303	REXX0292	8P (POWER-MAIN)	[M]
W308B	RWJ0102095SS	2P DECK-CASS EJECT	[M]
W503	REXX0290	6P WIRE	[M]
W600	RWJ1111138XX	11P PANEL-DECK WIRE	[M]
W604	RWJ0207130XX	7P (PANEL-TRANS)	[M]
W605	REXX0352	9P (PANEL-HP P)	[M]
W610	RWJ1107100XX	WIRE	[M]
W611	REXX0368	WIRE	[M]
W1903	RWJ0102050KR	MOTOR WIRE	[M]
		RESISTORS	
R102	ERJ3GEYJ472V	4.7K 1/16W	[M]
R103	ERJ3GEYJ101V	100 1/16W	[M]
R104	ERJ3GEYJ103V	10K 1/16W	[M]
R105	ERJ3GEYJ471V	470 1/16W	[M]
R106	ERJ3GEYJ474V	470K 1/16W	[M]
R107	ERJ3GEYJ331V	330 1/16W	[M]
R108	ERJ3GEYJ474V	470K 1/16W	[M]
R109	ERJ3GEYJ331V	330 1/16W	[M]
R110	ERJ3GEYJ102V	1K 1/16W	[M]
R111	ERJ3GEYJ391V	390 1/16W	[M]
R112	ERJ3GEYJ104V	100K 1/16W	[M]
R113	ERJ3GEYJ103V	10K 1/16W	[M]
R114	ERJ3GEYJ562V	5.6K 1/16W	[M]
R115	ERJ3GEYJ561V	560 1/16W	[M]
R116	ERJ3GEYJ102V	1K 1/16W	[M]
R117	ERJ3GEYJ683V	68K 1/16W	[M]
R118	ERJ3GEYJ332V	3.3K 1/16W	[M]
R119	ERJ3GEYJ123V	12K 1/16W	[M]
R120	ERJ3GEYJ473V	47K 1/16W	[M]
R121	ERJ3GEYJ223V	22K 1/16W	[M]
R122	ERJ3GEYJ272V	2.7K 1/16W	[M]
R123	ERJ3GEYJ683V	68K 1/16W	[M]
R124	ERJ3GEYJ330V	33 1/16W	[M]
R125	ERJ3GEYJ471V	470 1/16W	[M]
R126	ERJ3GEYJ102V	1K 1/16W	[M]
R127	ERJ3GEYJ471V	470 1/16W	[M]
R128	ERJ3GEYJ820V	82 1/16W	[M]
R129	ERJ3GEYJ273V	27K 1/16W	[M]
R130	ERJ3GEYJ103V	10K 1/16W	[M]
R131	ERJ3GEYJ680V	68 1/16W	[M]
R132	ERJ3GEYJ103V	10K 1/16W	[M]
R133	ERJ3GEYJ102V	1K 1/16W	[M]
R134	ERJ3GEYJ471V	470 1/16W	[M]
R135	ERJ3GEYJ102V	1K 1/16W	[M]
R136	ERJ3GEYJ102V	1K 1/16W	[M]
R137	ERJ3GEYJ102V	1K 1/16W	[M]
R138	ERJ3GEYJ332V	3.3K 1/16W	[M]
R139	ERJ3GEYJ223V	22K 1/16W	[M]
R140	ERJ3GEYJ223V	22K 1/16W	[M]
R141	ERJ3GEYJ682V	6.8K 1/16W	[M]
R142	ERJ3GEYJ682V	6.8K 1/16W	[M]
R143	ERJ3GEYJ223V	22K 1/16W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R145	ERJ3GEYJ104V	100K 1/16W	[M]
R146	ERJ3GEYJ104V	100K 1/16W	[M]
R151	ERJ3GEYJ820V	82 1/16W	[M]
R152	ERJ3GEY0R00V	0 1/16W	[M]
R201	ERJ3GEYJ183V	18K 1/16W	[M]
R202	ERJ3GEYJ182V	1.8K 1/16W	[M]
R203	ERJ3GEYJ103V	10K 1/16W	[M]
R204	ERJ3GEYJ183V	18K 1/16W	[M]
R205	ERJ3GEYJ223V	22K 1/16W	[M]
R206	ERJ3GEYJ682V	6.8K 1/16W	[M]
R207	ERJ3GEYJ183V	18K 1/16W	[M]
R208	ERJ3GEYJ182V	1.8K 1/16W	[M]
R211	ERJ3GEYJ392V	3.9K 1/16W	[M]
R212	ERJ3GEYJ122V	1.2K 1/16W	[M]
R214	ERJ3GEYJ562V	5.6K 1/16W	[M]
R215	ERJ3GEYJ822V	8.2K 1/16W	[M]
R216	ERJ3GEY0R00V	0 1/16W	[M]
R218	ERDS1FVJ100T	10 1/2W	[M]
R219	ERDS1FVJ100T	10 1/2W	[M]
R220	ERDS1FVJ100T	10 1/2W	[M]
R221	ERDS1FVJ100T	10 1/2W	[M]
R301	ERJ3GEYJ472V	4.7K 1/16W	[M]
R302	ERJ3GEYJ103V	10K 1/16W	[M]
R306	ERDS1FVJ1R0T	1 1/2W	[M]
R311	ERJ3GEY0R00V	0 1/16W	[M]
R312	ERJ3GEY0R00V	0 1/16W	[M]
R313	ERJ3GEY0R00V	0 1/16W	[M]
R347	ERJ3GEYJ101V	100 1/16W	[M]
R348	ERJ3GEYJ121V	120 1/16W	[M]
R391	ERJ3GEYJ102V	1K 1/16W	[M]
R393	ERJ3GEYJ102V	1K 1/16W	[M]
R394	ERJ3GEYJ102V	1K 1/16W	[M]
R395	ERJ3GEYJ104V	100K 1/16W	[M]
R401	ERJ3GEYJ183V	18K 1/16W	[M]
R402	ERJ3GEYJ182V	1.8K 1/16W	[M]
R403	ERJ3GEYJ103V	10K 1/16W	[M]
R404	ERJ3GEYJ183V	18K 1/16W	[M]
R405	ERJ3GEYJ223V	22K 1/16W	[M]
R406	ERJ3GEYJ682V	6.8K 1/16W	[M]
R407	ERJ3GEYJ183V	18K 1/16W	[M]
R408	ERJ3GEYJ182V	1.8K 1/16W	[M]
R411	ERJ3GEYJ392V	3.9K 1/16W	[M]
R412	ERJ3GEYJ122V	1.2K 1/16W	[M]
R414	ERJ3GEYJ562V	5.6K 1/16W	[M]
R415	ERJ3GEYJ822V	8.2K 1/16W	[M]
R416	ERJ3GEY0R00V	0 1/16W	[M]
R418	ERDS1FVJ100T	10 1/2W	[M]
R419	ERDS1FVJ100T	10 1/2W	[M]
R420	ERDS1FVJ100T	10 1/2W	[M]
R421	ERDS1FVJ100T	10 1/2W	[M]
R505	ERDS2TJ563T	56K 1/4W	[M]
R506	ERDS2TJ563T	56K 1/4W	[M]
R507	ERDS2TJ103T	10K 1/4W	[M]
R509	ERDS2TJ472T	4.7K 1/4W	[M]
R510	ERDS2TJ122T	1.2K 1/4W	[M]
R511	ERDS1FVJ102T	1K 1/2W	[M]
R512	ERDS1FVJ151T	150 1/2W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R513	ERDS2TJ331T	330 1/4W	[M]
R514	ERDS2TJ563T	56K 1/4W	[M]
R515	ERDS2TJ563T	56K 1/4W	[M]
R516	ERDS2TJ222T	2.2K 1/4W	[M]
R517	ERDS2TJ331T	330 1/4W	[M]
R518	ERDS2TJ122T	1.2K 1/4W	[M]
R519	ERDS2TJ2R2T	2.2 1/4W	[M]
R520	ERDS2TJ2R2T	2.2 1/4W	[M]
R521	ERDS2TJ101T	100 1/4W	[M]
R522	ERDS1FVJ120T	12 1/2W	[M]
R523	ERD2FCVG120T	12 1/4W	[M]
R524	ERDS2TJ2R2T	2.2 1/4W	[M]
R526	ERDS2TJ103T	10K 1/4W	[M]
R532	ERDS2TJ153T	15K 1/4W	[M]
R533	ERDS2TJ153T	15K 1/4W	[M]
R534	ERDS1FVJ331T	330 1/2W	[M]
R536	ERDS1FVJ2R2T	2.2 1/2W	[M]
R537	ERDS2TJ222T	2.2K 1/4W	[M]
R539	ERDS1FVJ392T	3.9K 1/2W	[M]
R540	ERDS2TJ153T	15K 1/4W	[M]
R541	ERDS2TJ153T	15K 1/4W	[M]
R542	ERDS2TJ332T	3.3K 1/4W	[M]
R543	ERDS2TJ332T	3.3K 1/4W	[M]
R544	ERDS2TJ562T	5.6K 1/4W	[M]
R545	ERDS2TJ562T	5.6K 1/4W	[M]
R546	ERDS2TJ223T	22K 1/4W	[M]
R547	ERDS2TJ683T	68K 1/4W	[M]
R548	ERDS2TJ184T	180K 1/4W	[M]
R549	ERDS1FVJ2R2T	2.2 1/2W	[M]
R550	ERDS1FVJ331T	330 1/2W	[M]
R551	ERDS2TJ104T	100K 1/4W	[M]
R554	ERDS1FVJ331T	330 1/2W	[M]
R556	ERD2FCVG270T	27 1/4W	[M]
R557	ERDS1FVJ270T	27 1/2W	[M]
R561	ERDS2TJ104T	100K 1/4W	[M]
R562	ERDS2TJ394T	390K 1/4W	[M]
R565	ERDS2TJ123T	12K 1/4W	[M]
R566	ERDS2TJ103T	10K 1/4W	[M]
R567	ERDS2TJ151T	150 1/4W	[M]
R568	ERDS1FVJ150T	15 1/2W	[M]
R569	ERDS1FVJ270T	27 1/2W	[M]
R571	ERDS1FVJ332T	3.3K 1/2W	[M]
R572	ERDS2TJ561T	560 1/4W	[M]
R573	ERDS2TJ272T	2.7K 1/4W	[M]
R574	ERDS2TJ272T	2.7K 1/4W	[M]
R576	ERDS2TJ103T	10K 1/4W	[M]
R577	ERDS2TJ103T	10K 1/4W	[M]
R578	ERDS2TJ332T	3.3K 1/4W	[M]
R580	ERDS1FVJ180T	18 1/2W	[M]
R581	ERDS1FVJ180T	18 1/2W	[M]
R583	ERDS2TJ821T	820 1/4W	[M]
R584	ERDS2TJ151T	150 1/4W	[M]
R585	ERDS1FVJ220T	22 1/2W	[M]
R586	ERDS2TJ151T	150 1/4W	[M]
R587	ERDS2TJ472T	4.7K 1/4W	[M]
R589	ERD2FCVJ4R7T	4.7 1/4W	[M]
R590	ERJ3GEYJ151V	150 1/16W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R591	ERJ3GEYJ331V	330 1/16W	[M]
R600	ERJ3GEY0R00V	0 1/16W	[M]
R601	ERJ3GEYJ103V	10K 1/16W	[M]
R602	ERJ3GEYJ682V	6.8K 1/16W	[M]
R603	ERJ3GEYJ472V	4.7K 1/16W	[M]
R604	ERJ3GEYJ272V	2.7K 1/16W	[M]
R605	ERJ3GEYJ222V	2.2K 1/16W	[M]
R606	ERJ3GEYJ182V	1.8K 1/16W	[M]
R607	ERJ3GEYJ122V	1.2K 1/16W	[M]
R608	ERJ3GEYJ102V	1K 1/16W	[M]
R609	ERJ3GEYJ102V	1K 1/16W	[M]
R610	ERJ3GEYJ103V	10K 1/16W	[M]
R611	ERJ3GEYJ682V	6.8K 1/16W	[M]
R612	ERJ3GEYJ472V	4.7K 1/16W	[M]
R613	ERJ3GEYJ272V	2.7K 1/16W	[M]
R614	ERJ3GEYJ222V	2.2K 1/16W	[M]
R615	ERJ3GEYJ182V	1.8K 1/16W	[M]
R616	ERJ3GEYJ122V	1.2K 1/16W	[M]
R617	ERJ3GEYJ102V	1K 1/16W	[M]
R618	ERJ3GEYJ102V	1K 1/16W	[M]
R619	ERJ3GEYJ103V	10K 1/16W	[M]
R620	ERJ3GEYJ103V	10K 1/16W	[M]
R621	ERJ3GEYJ101V	100 1/16W	[M]
R622	ERJ3GEYJ101V	100 1/16W	[M]
R623	ERJ3GEYJ223V	22K 1/16W	[M]
R624	ERJ3GEYJ101V	100 1/16W	[M]
R625	ERJ3GEYJ472V	4.7K 1/16W	[M]
R626	ERJ3GEYJ472V	4.7K 1/16W	[M]
R627	ERJ3GEYJ473V	47K 1/16W	[M]
R628	ERJ3GEYJ473V	47K 1/16W	[M]
R629	ERJ3GEYJ472V	4.7K 1/16W	[M]
R630	ERJ3GEYJ101V	100 1/16W	[M]
R631	ERJ3GEYJ101V	100 1/16W	[M]
R632	ERJ3GEYJ101V	100 1/16W	[M]
R633	ERJ3GEYJ472V	4.7K 1/16W	[M]
R634	ERJ3GEY0R00V	0 1/16W	[M]
R636	ERJ3GEYJ471V	470 1/16W	[M]
R638	ERJ3GEYJ101V	100 1/16W	[M]
R639	ERJ3GEYJ222V	2.2K 1/16W	[M]
R644	ERJ3GEYJ473V	47K 1/16W	[M]
R645	ERJ3GEYJ473V	47K 1/16W	[M]
R646	ERJ3GEYJ473V	47K 1/16W	[M]
R647	ERJ3GEYJ473V	47K 1/16W	[M]
R648	ERJ3GEYJ473V	47K 1/16W	[M]
R649	ERJ3GEYJ223V	22K 1/16W	[M]
R650	ERJ3GEYJ102V	1K 1/16W	[M]
R651	ERJ3GEYJ473V	47K 1/16W	[M]
R652	ERJ3GEYJ473V	47K 1/16W	[M]
R653	ERJ3GEYJ473V	47K 1/16W	[M]
R654	ERJ3GEYJ473V	47K 1/16W	[M]
R655	ERJ3GEYJ473V	47K 1/16W	[M]
R656	ERJ3GEYJ473V	47K 1/16W	[M]
R657	ERJ3GEYJ473V	47K 1/16W	[M]
R658	ERJ3GEYJ221V	220 1/16W	[M]
R659	ERJ3GEYJ473V	47K 1/16W	[M]
R660	ERJ3GEYJ101V	100 1/16W	[M]
R661	ERJ3GEYJ101V	100 1/16W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R662	ERJ3GEYJ103V	10K 1/16W	[M]
R663	ERJ3GEYJ123V	12K 1/16W	[M]
R664	ERJ3GEYJ223V	22K 1/16W	[M]
R665	ERJ3GEYJ223V	22K 1/16W	[M]
R666	ERJ3GEYJ223V	22K 1/16W	[M]
R667	ERJ3GEYJ472V	4.7K 1/16W	[M]
R668	ERJ3GEYJ223V	22K 1/16W	[M]
R669	ERJ3GEYJ470V	47 1/16W	[M]
R670	ERJ3GEYJ681V	680 1/16W	[M]
R671	ERJ3GEYJ221V	220 1/16W	[M]
R672	ERJ3GEY0R00V	0 1/16W	[M]
R673	ERJ3GEYJ334V	330K 1/16W	[M]
R674	ERJ3GEYJ106V	10M 1/16W	[M]
R675	ERJ3GEYJ472V	4.7K 1/16W	[M]
R676	ERJ3GEYJ472V	4.7K 1/16W	[M]
R678	ERJ3GEYJ101V	100 1/16W	[M]
R679	ERJ3GEYJ103V	10K 1/16W	[M]
R680	ERJ3GEYJ102V	1K 1/16W	[M]
R681	ERJ3GEYJ103V	10K 1/16W	[M]
R682	ERJ3GEYJ471V	470 1/16W	[M]
R683	ERJ3GEYJ473V	47K 1/16W	[M]
R684	ERJ3GEYJ223V	22K 1/16W	[M]
R685	ERJ3GEYJ474V	470K 1/16W	[M]
R686	ERJ3GEYJ472V	4.7K 1/16W	[M]
R687	ERJ3GEYJ680V	68 1/16W	[M]
R688	ERJ3GEYJ680V	68 1/16W	[M]
R689	ERJ3GEYJ332V	3.3K 1/16W	[M]
R690	ERJ3GEYJ471V	470 1/16W	[M]
R691	ERJ3GEYJ471V	470 1/16W	[M]
R692	ERJ3GEYJ471V	470 1/16W	[M]
R693	ERJ3GEYJ471V	470 1/16W	[M]
R695	ERJ3GEYJ101V	100 1/16W	[M]
R697	ERJ3GEYJ101V	100 1/16W	[M]
R698	ERJ3GEYJ101V	100 1/16W	[M]
R699	ERJ3GEYJ101V	100 1/16W	[M]
R700	ERDS1FVJ180T	18 1/2W	[M]
R700	ERJ3GEYJ221V	220 1/16W	[M]
R701	ERDS2TJ563T	56K 1/4W	[M]
R701	ERJ3GEYJ221V	220 1/16W	[M]
R701	ERJ3GEYJ4R7V	4.7 1/16W	[M]
R702	ERDS2TJ101T	100 1/4W	[M]
R702	ERJ3GEYJ103V	10K 1/16W	[M]
R703	ERDS2TJ103T	10K 1/4W	[M]
R704	ERDS2TJ563T	56K 1/4W	[M]
R704	ERJ3GEYJ102V	1K 1/16W	[M]
R705	ERDS2TJ103T	10K 1/4W	[M]
R705	ERJ3GEYJ393V	39K 1/16W	[M]
R706	ERDS2TJ472T	4.7K 1/4W	[M]
R706	ERJ3GEYJ102V	1K 1/16W	[M]
R707	ERDS2TJ562T	5.6K 1/4W	[M]
R707	ERJ3GEYJ154V	150K 1/16W	[M]
R708	ERDS2TJ103T	10K 1/4W	[M]
R708	ERJ3GEYJ154V	150K 1/16W	[M]
R708	ERJ3GEYJ473V	47K 1/16W	[M]
R709	ERDS2TJ824T	820K 1/4W	[M]
R709	ERJ3GEYJ473V	47K 1/16W	[M]
R710	ERDS2TJ563T	56K 1/4W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R711	ERDS2TJ824T	820K 1/4W	[M]
R711	ERJ3GEYJ823V	82K 1/16W	[M]
R712	ERJ3GEYJ221V	220 1/16W	[M]
R713	ERDS2TJ563T	56K 1/4W	[M]
R714	ERJ3GEY0R00V	0 1/16W	[M]
R715	ERJ3GEYJ102V	1K 1/16W	[M]
R717	ERJ3GEYJ102V	1K 1/16W	[M]
R718	ERJ3GEYJ102V	1K 1/16W	[M]
R720	ERDS2TJ683T	68K 1/4W	[M]
R721	ERDS2TJ683T	68K 1/4W	[M]
R721	ERJ3GEYJ101V	100 1/16W	[M]
R722	ERDS2TJ104T	100K 1/4W	[M]
R723	ERDS2TJ102T	1K 1/4W	[M]
R723	ERJ3GEYJ103V	10K 1/16W	[M]
R724	ERDS2TJ104T	100K 1/4W	[M]
R724	ERJ3GEYJ153V	15K 1/16W	[M]
R725	ERDS2TJ102T	1K 1/4W	[M]
R725	ERJ3GEYJ681V	680 1/16W	[M]
R726	ERDS2TJ273T	27K 1/4W	[M]
R727	ERDS2TJ104T	100K 1/4W	[M]
R727	ERJ3GEYJ272V	2.7K 1/16W	[M]
R728	ERDS2TJ102T	1K 1/4W	[M]
R728	ERJ3GEYJ222V	2.2K 1/16W	[M]
R729	ERDS2TJ102T	1K 1/4W	[M]
R729	ERJ3GEYJ272V	2.7K 1/16W	[M]
R730	ERDS2TJ224T	220K 1/4W	[M]
R731	ERDS2TJ562T	5.6K 1/4W	[M]
R731	ERJ3GEYJ103V	10K 1/16W	[M]
R732	ERDS2TJ153T	15K 1/4W	[M]
R732	ERJ3GEYJ102V	1K 1/16W	[M]
R733	ERDS2TJ153T	15K 1/4W	[M]
R734	ERDS2TJ221T	220 1/4W	[M]
R735	ERDS2TJ224T	220K 1/4W	[M]
R735	ERJ3GEYJ101V	100 1/16W	[M]
R736	ERDS2TJ562T	5.6K 1/4W	[M]
R736	ERJ3GEYJ101V	100 1/16W	[M]
R737	ERDS2TJ681T	680 1/4W	[M]
R738	ERDS2TJ153T	15K 1/4W	[M]
R739	ERDS2TJ681T	680 1/4W	[M]
R740	ERDS2TJ153T	15K 1/4W	[M]
R741	ERDS2TJ562T	5.6K 1/4W	[M]
R741	ERJ3GEYJ473V	47K 1/16W	[M]
R742	ERDS2TJ562T	5.6K 1/4W	[M]
R742	ERJ3GEYJ224V	220K 1/16W	[M]
R743	ERDS2TJ102T	1K 1/4W	[M]
R744	ERDS2TJ153T	15K 1/4W	[M]
R744	ERJ3GEYJ393V	39K 1/16W	[M]
R745	ERDS2TJ562T	5.6K 1/4W	[M]
R746	ERDS2TJ562T	5.6K 1/4W	[M]
R747	ERDS2TJ102T	1K 1/4W	[M]
R748	ERDS2TJ152T	1.5K 1/4W	[M]
R749	ERDS2TJ152T	1.5K 1/4W	[M]
R749	ERJ3GEYJ272V	2.7K 1/16W	[M]
R750	ERDS2TJ332T	3.3K 1/4W	[M]
R750	ERJ3GEYJ103V	10K 1/16W	[M]
R751	ERDS2TJ332T	3.3K 1/4W	[M]
R751	ERJ3GEYJ472V	4.7K 1/16W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R752	ERDS2TJ104T	100K 1/4W	[M]
R753	ERDS2TJ103T	10K 1/4W	[M]
R753	ERJ3GEYJ100V	10 1/16W	[M]
R754	ERDS2TJ220T	22 1/4W	[M]
R754	ERJ3GEYJ5R6V	5.6 1/16W	[M]
R755	ERDS2TJ220T	22 1/4W	[M]
R756	ERDS2TJ220T	22 1/4W	[M]
R757	ERDS2TJ220T	22 1/4W	[M]
R758	ERDS2TJ103T	10K 1/4W	[M]
R759	ERDS2TJ682T	6.8K 1/4W	[M]
R760	ERDS2TJ223T	22K 1/4W	[M]
R761	ERDS2TJ223T	22K 1/4W	[M]
R762	ERDS2TJ103T	10K 1/4W	[M]
R763	ERDS2TJ103T	10K 1/4W	[M]
R764	ERDS2TJ683T	68K 1/4W	[M]
R765	ERDS2TJ683T	68K 1/4W	[M]
R766	ERDS2TJ123T	12K 1/4W	[M]
R767	ERDS2TJ123T	12K 1/4W	[M]
R768	ERDS2TJ472T	4.7K 1/4W	[M]
R769	ERDS2TJ472T	4.7K 1/4W	[M]
R770	ERDS2TJ332T	3.3K 1/4W	[M]
R771	ERDS2TJ104T	100K 1/4W	[M]
R772	ERDS2TJ682T	6.8K 1/4W	[M]
R773	ERDS2TJ102T	1K 1/4W	[M]
R774	ERDS2TJ104T	100K 1/4W	[M]
R775	ERDS2TJ153T	15K 1/4W	[M]
R776	ERDS2TJ102T	1K 1/4W	[M]
R777	ERDS2TJ221T	220 1/4W	[M]
R778	ERDS2TJ153T	15K 1/4W	[M]
R779	ERDS2TJ153T	15K 1/4W	[M]
R780	ERDS2TJ473T	47K 1/4W	[M]
R781	ERDS2TJ473T	47K 1/4W	[M]
R900	ERJ3GEYJ103V	10K 1/16W	[M]
R901	ERJ3GEYJ103V	10K 1/16W	[M]
R902	ERJ3GEYJ103V	10K 1/16W	[M]
R903	ERJ3GEYJ103V	10K 1/16W	[M]
R904	ERJ3GEYJ123V	12K 1/16W	[M]
R905	ERJ3GEYJ472V	4.7K 1/16W	[M]
R906	ERJ3GEYJ472V	4.7K 1/16W	[M]
R907	ERJ3GEYJ472V	4.7K 1/16W	[M]
R910	ERJ3GEYJ472V	4.7K 1/16W	[M]
R911	ERJ3GEYJ103V	10K 1/16W	[M]
R912	ERJ3GEYJ101V	100 1/16W	[M]
R913	ERJ3GEYJ562V	5.6K 1/16W	[M]
R914	ERJ3GEYJ562V	5.6K 1/16W	[M]
R915	ERJ3GEYJ562V	5.6K 1/16W	[M]
R916	ERJ3GEYJ562V	5.6K 1/16W	[M]
R917	ERJ3GEYJ101V	100 1/16W	[M]
R918	ERJ3GEYJ101V	100 1/16W	[M]
R919	ERJ3GEYJ101V	100 1/16W	[M]
R920	ERJ3GEYJ104V	100K 1/16W	[M]
R921	ERJ3GEYJ104V	100K 1/16W	[M]
R922	ERJ3GEYJ104V	100K 1/16W	[M]
R923	ERJ3GEYJ223V	22K 1/16W	[M]
R924	ERJ3GEYJ103V	10K 1/16W	[M]
R925	ERJ3GEYJ223V	22K 1/16W	[M]
R930	ERJ3GEYJ102V	1K 1/16W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R972	ERDS2TJ821T	820 1/4W	[M]
R973	ERDS2TJ393T	39K 1/4W	[M]
R1101	ERJ3GEYJ270V	27 1/16W	[M]
R1102	ERJ3GEYJ152V	1.5K 1/16W	[M]
R1103	ERJ3GEYJ183V	18K 1/16W	[M]
R1104	ERJ3GEYJ103V	10K 1/16W	[M]
R1105	ERJ3GEYJ222V	2.2K 1/16W	[M]
R1106	ERJ3GEYJ104V	100K 1/16W	[M]
R1107	ERJ3GEYJ102V	1K 1/16W	[M]
R1109	ERJ3GEYJ102V	1K 1/16W	[M]
R1110	ERJ3GEYJ333V	33K 1/16W	[M]
R1201	ERJ3GEYJ270V	27 1/16W	[M]
R1202	ERJ3GEYJ152V	1.5K 1/16W	[M]
R1203	ERJ3GEYJ183V	18K 1/16W	[M]
R1204	ERJ3GEYJ103V	10K 1/16W	[M]
R1205	ERJ3GEYJ222V	2.2K 1/16W	[M]
R1206	ERJ3GEYJ104V	100K 1/16W	[M]
R1207	ERJ3GEYJ102V	1K 1/16W	[M]
R1209	ERJ3GEYJ102V	1K 1/16W	[M]
R1210	ERJ3GEYJ333V	33K 1/16W	[M]
R1302	ERJ3GEYJ331V	330 1/16W	[M]
R1303	ERJ3GEYJ475V	4.7M 1/16W	[M]
R1304	ERJ3GEYJ223V	22K 1/16W	[M]
R1305	ERJ3GEYJ103V	10K 1/16W	[M]
R1307	ERD25FVJ220T	22 1/4W	[M]
R1308	ERD25FVJ220T	22 1/4W	[M]
R1309	ERDS1FVJ471T	470 1/2W	[M]
R1313	ERJ3GEYJ103V	10K 1/16W	[M]
R1314	ERJ3GEYJ102V	1K 1/16W	[M]
R1316	ERJ3GEYJ102V	1K 1/16W	[M]
R1318	ERJ3GEYJ103V	10K 1/16W	[M]
R1327	ERJ3GEYJ472V	4.7K 1/16W	[M]
R1328	ERJ3GEYJ153V	15K 1/16W	[M]
R1329	ERJ3GEYJ472V	4.7K 1/16W	[M]
R1330	ERD2FCVJ4R7T	4.7 1/4W	[M]
R1331	ERJ3GEYJ752V	7.5K 1/16W	[M]
R1332	ERJ3GEYJ103V	10K 1/16W	[M]
R1333	ERD2FCVJ4R7T	4.7 1/4W	[M]
R1334	ERJ3GEYJ223V	22K 1/16W	[M]
R1335	ERJ3GEYJ152V	1.5K 1/16W	[M]
R1336	ERJ3GEYJ152V	1.5K 1/16W	[M]
R1337	ERJ3GEYJ103V	10K 1/16W	[M]
R1338	ERJ3GEYJ472V	4.7K 1/16W	[M]
R1341	ERJ3GEYJ471V	470 1/16W	[M]
R1342	ERJ3GEYJ473V	47K 1/16W	[M]
R1343	ERJ3GEYJ332V	3.3K 1/16W	[M]
R1344	ERJ3GEYJ273V	27K 1/16W	[M]
R1345	ERJ3GEYJ102V	1K 1/16W	[M]
R1371	ERJ3GEYJ223V	22K 1/16W	[M]
R1374	ERJ3GEYJ471V	470 1/16W	[M]
R1401	ERJ3GEYJ123V	12K 1/16W	[M]
R1402	ERJ3GEYJ274V	270K 1/16W	[M]
R1403	ERJ3GEYJ103V	10K 1/16W	[M]
R1404	ERJ3GEYJ223V	22K 1/16W	[M]
R1405	ERJ3GEYJ103V	10K 1/16W	[M]
		CAPACITORS	

Ref. No.	Part No.	Part Name & Description	Remarks
C11	F1D1E103A001	0.01 25V	[M]
C12	ECA1CAK101XE	100 16V	[M]
C21	F1D1E103A001	0.01 25V	[M]
C22	ECA1CAK101XE	100 16V	[M]
C101	ECJ1VB1E103K	0.01 25V	[M]
C102	ECA1CAK101XB	100 16V	[M]
C103	ECJ1VB1E103K	0.01 25V	[M]
C104	ECJ1VB1H102K	1000P 50V	[M]
C105	ECJ1VB1H102K	1000P 50V	[M]
C106	ECJ1VB1H103K	0.01 50V	[M]
C107	ECUV1C473KBV	0.047 16V	[M]
C108	ECUV1H080DCV	8P 50V	[M]
C109	ECJ1VB1H102K	1000P 50V	[M]
C110	ECJ1VB1E103K	0.01 25V	[M]
C111	ECA1HAK4R7XB	4.7 50V	[M]
C112	ECJ1VB1E103K	0.01 25V	[M]
C113	ECJ1VB1H102K	1000P 50V	[M]
C114	ECA1HAK3R3XB	3.3 50V	[M]
C115	ECA1HAK4R7XB	4.7 50V	[M]
C116	ECUV1C333KBV	0.033 16V	[M]
C117	ECJ1VB1E103K	0.01 25V	[M]
C118	ECJ1VB1E103K	0.01 25V	[M]
C119	F0A2A561A010	560P 100V	[M]
C120	ECA1CAK100XB	10 16V	[M]
C121	ECA1HAKR47XB	0.47 50V	[M]
C122	ECA1HAK010XB	1 50V	[M]
C123	ECA1HAK010XB	1 50V	[M]
C124	ECUV1H101JCV	100P 50V	[M]
C125	ECA1CAK220XB	22 16V	[M]
C127	ECA1CAK220XB	22 16V	[M]
C129	ECA0JAK101XB	100 6.3V	[M]
C130	ECA0JAK101XB	100 6.3V	[M]
C131	ECJ2VC1H101K	100 50V	[M]
C132	ECJ1VB1H102K	1000P 50V	[M]
C133	ECUV1H270JCV	27P 50V	[M]
C134	ECUV1H270JCV	27P 50V	[M]
C136	ECJ1VB1H102K	1000P 50V	[M]
C137	ECUV1H332KBV	3300P 50V	[M]
C138	ECJ1VB1E103K	0.01 25V	[M]
C139	ECA1HAK4R7XB	4.7 50V	[M]
C141	ECA1HAK010XB	1 50V	[M]
C142	ECA1HAK010XB	1 50V	[M]
C143	ECJ1VB1H472K	4700P 50V	[M]
C144	ECJ1VB1H472K	4700P 50V	[M]
C147	ECJ1VB1H102K	1000P 50V	[M]
C148	ECJ1VB1E103K	0.01 25V	[M]
C149	F1H1C104A065	0.1 16V	[M]
C201	ECJ1VC1H471J	470 50V	[M]
C203	ECA1HAK4R7XB	4.7 50V	[M]
C205	ECA1HAK2R2XB	2.2 50V	[M]
C206	ECUV1H221KBV	220P 50V	[M]
C207	ECA1CAK100XB	10 16V	[M]
C208	ECA1HAK2R2XB	2.2 50V	[M]
C209	ECA1HAK2R2XB	2.2 50V	[M]
C210	ECUV1H471KBV	470P 50V	[M]
C211	ECQV1H823JZ3	0.082 50V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C212	ECQV1H394JZ3	0.39 50V	[M]
C213	ECA1CAK100XB	10 16V	[M]
C215	ECA1HAK2R2XB	2.2 50V	[M]
C217	ECJ1VB1H102K	1000P 50V	[M]
C218	ECUV1E473KBV	0.047 25V	[M]
C219	ECUV1E473KBV	0.047 25V	[M]
C220	ECUV1E473KBV	0.047 25V	[M]
C221	ECUV1E473KBV	0.047 25V	[M]
C222	ECUV1E473KBV	0.047 25V	[M]
C223	ECUV1E473KBV	0.047 25V	[M]
C232	ECJ1VB1H102K	1000P 50V	[M]
C301	ECJ1VB1H102K	1000P 50V	[M]
C302	ECJ1VB1E103K	0.01 25V	[M]
C303	ECUV1H101JCV	100P 50V	[M]
C304	ECUV1H101JCV	100P 50V	[M]
C305	ECUV1H101JCV	100P 50V	[M]
C306	ECA1HAK220XB	22 50V	[M]
C307	ECA1CAK101XB	100 16V	[M]
C391	ECJ1VC1H470J	47P 50V	[M]
C392	ECUV1H561KBV	560P 50V	[M]
C393	ECA1HAK100XB	10 50V	[M]
C394	ECJ1VC1H102J	1000P 50V	[M]
C395	ECA1HAK100XB	10 50V	[M]
C396	ECA0JAK470XB	47 6.3V	[M]
C397	ECJ1VB1H103K	0.01 50V	[M]
C398	ECJ1VB1H331K	330P 50V	[M]
C399	ECJ1VC1H470J	47P 50V	[M]
C400	ECUV1H101JCV	100P 50V	[M]
C401	ECJ1VC1H471J	470 50V	[M]
C403	ECA1HAK4R7XB	4.7 50V	[M]
C405	ECA1HAK2R2XB	2.2 50V	[M]
C406	ECUV1H221KBV	220P 50V	[M]
C407	ECA1CAK100XB	10 16V	[M]
C408	ECA1HAK2R2XB	2.2 50V	[M]
C409	ECA1HAK2R2XB	2.2 50V	[M]
C410	ECUV1H471KBV	470P 50V	[M]
C411	ECQV1H823JZ3	0.082 50V	[M]
C412	ECQV1H394JZ3	0.39 50V	[M]
C413	ECA1CAK100XB	10 16V	[M]
C415	ECA1HAK2R2XB	2.2 50V	[M]
C416	ECUV1H101JCV	100P 50V	[M]
C417	ECJ1VB1H102K	1000P 50V	[M]
C418	ECUV1E473KBV	0.047 25V	[M]
C419	ECUV1E473KBV	0.047 25V	[M]
C432	ECJ1VB1H102K	1000P 50V	[M]
C500	F1D1H821A012	820P 50V	[M]
C501	F1D1C182A010	1800P 16V	[M]
C502	F1D1C182A010	1800P 16V	[M]
C503	F1D1H821A012	820P 50V	[M]
C504	F1D1H390A006	39P 50V	[M]
C505	F1D1H390A006	39P 50V	[M]
C506	ECA1VAM222XB	2200 35V	[M]
C507	ECA1VAM222XB	2200 35V	[M]
C508	ECA1EAM332XB	3300 25V	[M]
C509	F1D1H330A006	33P 50V	[M]
C510	F1D1H330A006	33P 50V	[M]
C511	ECKR1H103ZF5	0.01 50V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C512	ECA1CAK101XB	100 16V	[M]
C513	ECKR1H103ZF5	0.01 50V	[M]
C514	ECA1AAK330XB	33 10V	[M]
C515	ECBT1H103KB5	0.01 50V	[M]
C516	ECA1HAK100XB	10 50V	[M]
C517	ECKR2H103ZF5	0.01 500V	[M]
C518	ECKR1H103ZF5	0.01 50V	[M]
C520	ECKR1H103ZF5	0.01 50V	[M]
C521	ECA1EAK330XB	33 25V	[M]
C526	ECA1HM330B	33 50V	[M]
C528	ECKR1H103ZF5	0.01 50V	[M]
C530	ECQE2104KF3	0.1 250V	[M]
C533	ECQV1H104JZ3	0.1 50V	[M]
C535	ECKR2H103ZF5	0.01 500V	[M]
C536	ECA1AAK221XB	220 10V	[M]
C537	F1D1H102A012	1000P 50V	[M]
C548	ECKR1H103ZF5	0.01 50V	[M]
C550	ECJ1VB1H103K	0.01 50V	[M]
C551	ECUV1H104KBV	0.1 50V	[M]
C552	ECA1HAK4R7XB	4.7 50V	[M]
C553	ECA1HAK010XB	1 50V	[M]
C575	ECA1HAK4R7XB	4.7 50V	[M]
C578	ECKR1H103ZF5	0.01 50V	[M]
C580	ECKR1H103ZF5	0.01 50V	[M]
C581	ECA1HAM470XB	47 50V	[M]
C582	ECQE2104KF3	0.1 250V	[M]
C583	ECKR1H103ZF5	0.01 50V	[M]
C584	ECA1CM102B	1000 16V	[M]EB
C584	RCA1CM102BT	1000 16V	[M]E,EG
C585	ECA1EAM101XB	100 25V	[M]
C586	ECA2AM100B	10 100V	[M]
C587	ECA1JM101B	100 63V	[M]
C588	ECA1HM101B	100 50V	[M]
C601	ECEA1VKA220B	22 35V	[M]
C602	ECEA1VKA220B	22 35V	[M]
C613	ECA0JAK101XB	100 6.3V	[M]
C614	F1H1C104A065	0.1 16V	[M]
C615	ECA0JM102B	1000 6.3V	[M]
C616	ECJ1VB1H102K	1000P 50V	[M]
C617	ECJ1VB1H331K	330P 50V	[M]
C618	ECUV1H221KBV	220P 50V	[M]
C619	ECUV1H221KBV	220P 50V	[M]
C621	ECJ1VB1H103K	0.01 50V	[M]
C622	ECA1CAK220XB	22 16V	[M]
C623	ECUV1H561KBV	560P 50V	[M]
C624	ECUV1H561KBV	560P 50V	[M]
C625	ECUV1H561KBV	560P 50V	[M]
C626	ECUV1H561KBV	560P 50V	[M]
C627	ECUV1H101JCV	100P 50V	[M]
C628	ECUV1H101JCV	100P 50V	[M]
C632	ECUV1C223KBV	0.022 16V	[M]
C633	ECJ1VC1H680J	68P 50V	[M]
C634	ECJ1VC1H680J	68P 50V	[M]
C635	ECJ1VC1H180J	18P 50V	[M]
C636	ECJ1VC1H220J	22P 50V	[M]
C637	ECUV1H560JCV	56P 50V	[M]
C638	ECUV1H560JCV	56P 50V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C639	ECJ1VB1H102K	1000P 50V	[M]
C640	ECJ1VB1H102K	1000P 50V	[M]
C641	ECJ1VB1H103K	0.01 50V	[M]
C642	ECUV1H101JCV	100P 50V	[M]
C643	ECUV1H101JCV	100P 50V	[M]
C644	ECA1HAK010XB	1 50V	[M]
C645	ECA1HAK2R2XB	2.2 50V	[M]
C646	ECA1HAK3R3XB	3.3 50V	[M]
C647	ECJ1VB1H102K	1000P 50V	[M]
C648	ECJ1VB1H103K	0.01 50V	[M]
C649	ECA0JAK470XB	47 6.3V	[M]
C651	F1H1C104A065	0.1 16V	[M]
C652	ECUV1H101JCV	100P 50V	[M]
C653	ECUV1H101JCV	100P 50V	[M]
C654	ECUV1H101JCV	100P 50V	[M]
C655	ECUV1H101JCV	100P 50V	[M]
C656	ECUV1H101JCV	100P 50V	[M]
C657	ECUV1H101JCV	100P 50V	[M]
C658	ECUV1H101JCV	100P 50V	[M]
C659	ECUV1H101JCV	100P 50V	[M]
C660	ECUV1H101JCV	100P 50V	[M]
C661	ECUV1H473KBV	0.047 50V	[M]
C662	ECJ1VB1E223K	0.022 25V	[M]
C663	ECJ1VB1E223K	0.022 25V	[M]
C664	ECUV1H104KBV	0.1 50V	[M]
C700	ECA0JAK101XB	100 6.3V	[M]
C701	ECEA0JKA330I	33 6.3V	[M]
C701	ECEA1CKA330B	33 16V	[M]
C702	ECA1HAK2R2XB	2.2 50V	[M]
C702	F1H1C104A065	0.1 16V	[M]
C703	ECEA0JKA101I	100 6.3V	[M]
C703	F1D1H1040002	0.1 50V	[M]
C704	ECA1AAK221XB	220 10V	[M]
C704	F1H1C104A065	0.1 16V	[M]
C705	ECEA1AKN100B	10 10V	[M]
C705	F1H1C104A065	0.1 16V	[M]
C706	ECUV1C473KBV	0.047 16V	[M]
C707	ECUV1C393KBV	0.039 16V	[M]
C709	F1D1H102A012	1000P 50V	[M]
C710	ECUV1H391KBV	390P 50V	[M]
C710	F1D1H102A012	1000P 50V	[M]
C711	ECA1CAK100XB	10 16V	[M]
C711	ECJ1VB1H272K	2700P 50V	[M]
C712	ECBT1C122KR5	1200P 16V	[M]
C712	ECJ1VB1H272K	2700P 50V	[M]
C713	ECA1HAK2R2XB	2.2 50V	[M]
C713	F1H1C104A065	0.1 16V	[M]
C714	ECEA0JKA101I	100 6.3V	[M]
C714	ECFR1C273KR	0.027 16V	[M]
C715	ECBT1C122KR5	1200P 16V	[M]
C715	ECJ1VB1H272K	2700P 50V	[M]
C716	ECA1HAK2R2XB	2.2 50V	[M]
C716	ECUV1H821KBV	820P 50V	[M]
C717	ECFR1C273KR	0.027 16V	[M]
C717	ECUV1E104ZFV	0.1 25V	[M]
C718	ECUV1A224KBV	0.22 10V	[M]
C720	ECA1HAK010XB	1 50V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C721	ECJ1VC1H150J	15P 50V	[M]
C721	F1D1C562A010	5600P 16V	[M]
C722	ECJ1VC1H150J	15P 50V	[M]
C722	F1D1C562A010	5600P 16V	[M]
C723	ECA1HAK010XB	1 50V	[M]
C723	ECEA1AKA221I	220 10V	[M]
C724	F1D1C562A010	5600P 16V	[M]
C724	F1H1C104A065	0.1 16V	[M]
C725	ECJ1VB1H102K	1000P 50V	[M]
C725	F1D1C562A010	5600P 16V	[M]
C726	ECA1CAK100XB	10 16V	[M]
C726	ECJ1VB1H102K	1000P 50V	[M]
C727	ECA1CAK100XB	10 16V	[M]
C727	ECA1HAK010XI	1 50V	[M]
C728	ECA1HAK010XI	1 50V	[M]
C728	ECBT1C332KR5	3300P 16V	[M]
C729	ECBT1C332KR5	3300P 16V	[M]
C730	ECA1HAK3R3XB	3.3 50V	[M]
C730	ECUV1E104ZFV	0.1 25V	[M]
C731	ECA0JAK221XI	220 6.3V	[M]
C731	ECA1HAK3R3XB	3.3 50V	[M]
C732	ECEA0JKA221I	220 6.3V	[M]
C732	F1D1H101A012	100P 50V	[M]
C733	F1D1H101A012	100P 50V	[M]
C733	F1H1C104A065	0.1 16V	[M]
C734	ECEA1AKA221I	220 10V	[M]
C735	ECUV1E104ZFV	0.1 25V	[M]
C736	ECQV1H124JZ3	0.12 50V	[M]
C737	ECQV1H124JZ3	0.12 50V	[M]
C738	ECA1CAK100XB	10 16V	[M]
C738	ECUV1C563KBV	0.056 16V	[M]
C739	ECUV1H222KBV	2200P 50V	[M]
C739	F1D1C272A010	2700P 16V	[M]
C740	F1D1C272A010	2700P 16V	[M]
C741	ECA1HAKR33XB	0.33 50V	[M]
C742	ECA1HAKR33XB	0.33 50V	[M]
C742	ECUV1C473KBV	0.047 16V	[M]
C743	ECBT1H103KB5	0.01 50V	[M]
C743	ECUV1E104ZFV	0.1 25V	[M]
C744	ECBT1H103KB5	0.01 50V	[M]
C744	ECUV1H562KBV	5600P 50V	[M]
C745	ECUV1E104ZFV	0.1 25V	[M]
C745	F1D1H101A012	100P 50V	[M]
C746	F1D1H101A012	100P 50V	[M]
C747	ECBT1H470JC5	47P 50V	[M]
C747	ECUV1H471KBV	470P 50V	[M]
C748	ECBT1H470JC5	47P 50V	[M]
C749	ECBT1H822KB5	8200P 50V	[M]
C749	ECJ1VB1H222K	2200P 50V	[M]
C750	ECBT1H822KB5	8200P 50V	[M]
C751	ECA1CAK100XB	10 16V	[M]
C752	ECA1CAK100XB	10 16V	[M]
C752	ECUV1H152KBV	1500P 50V	[M]
C753	ECUV1H471KBV	470P 50V	[M]
C754	ECUV1H471KBV	470P 50V	[M]
C755	ECBT1H681KB5	680P 50V	[M]
C756	ECBT1H681KB5	680P 50V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C1101	ECA1HAK010XB	1 50V	[M]
C1102	ECUV1H471KBV	470P 50V	[M]
C1103	ECA1CAK101XB	100 16V	[M]
C1104	ECUV1C273KBV	0.027 16V	[M]
C1105	ECUV1H471KBV	470P 50V	[M]
C1106	ECA1HAK2R2XB	2.2 50V	[M]
C1107	F1H1H152A219	1500P 50V	[M]
C1108	ECA1CAK100XB	10 16V	[M]
C1109	ECA1HAK3R3XB	3.3 50V	[M]
C1110	ECUV1H682KBV	6800P 50V	[M]
C1121	ECJ1VB1H102K	1000P 50V	[M]
C1122	ECUV1E103KBV	0.01 25V	[M]
C1123	ECUV1H271KBV	270P 50V	[M]
C1201	ECA1HAK010XB	1 50V	[M]
C1202	ECUV1H471KBV	470P 50V	[M]
C1203	ECA1CAK101XB	100 16V	[M]
C1204	ECUV1C273KBV	0.027 16V	[M]
C1205	ECUV1H471KBV	470P 50V	[M]
C1206	ECA1HAK2R2XB	2.2 50V	[M]
C1207	F1H1H152A219	1500P 50V	[M]
C1208	ECA1CAK100XB	10 16V	[M]
C1209	ECA1HAK3R3XB	3.3 50V	[M]
C1210	ECUV1H682KBV	6800P 50V	[M]
C1221	ECJ1VB1H102K	1000P 50V	[M]
C1222	ECUV1E103KBV	0.01 25V	[M]
C1223	ECUV1H271KBV	270P 50V	[M]
C1301	ECA1HAK0R1XB	0.1 50V	[M]
C1302	ECUV1C333KBV	0.033 16V	[M]
C1303	ECUV1C333KBV	0.033 16V	[M]
C1304	ECEA1HKA4R7B	4.7 50V	[M]
C1305	ECA1CAK330XB	33 16V	[M]
C1307	ECA1AAK221XQ	220 10V	[M]
C1308	ECA1CAK220XB	22 16V	[M]
C1310	ECA1HAK0R1XB	0.1 50V	[M]
C1311	ECA1CAK470XB	47 16V	[M]
C1312	ECUV1H332KBV	3300P 50V	[M]
C1314	ECUV1H222KBV	2200P 50V	[M]
C1315	ECUV1H222KBV	2200P 50V	[M]
C1316	ECJ1VB1H102K	1000P 50V	[M]
C1317	ECJ1VB1H102K	1000P 50V	[M]
C1318	ECQV1H473JZ3	0.047 50V	[M]
C1319	ECA1CAK101XB	100 16V	[M]
C1320	ECA1HAK010XB	1 50V	[M]
C1321	ECQP1472JZT	4700P 100V	[M]
C1322	F0A2A102A010	1000P 100V	[M]
C1323	ECEA1HKN010B	1 50V	[M]
C1324	ECA1CAK470XB	47 16V	[M]
C1325	ECUV1E103KBV	0.01 25V	[M]
C1326	ECA1CAK100XB	10 16V	[M]
C1371	ECUV1E103KBV	0.01 25V	[M]
		CHIP JUMPER	
RJ701	ERJ3GEY0R00V	0 1/16W	[M]
RJ702	ERJ3GEY0R00V	0 1/16W	[M]
RJ703	ERJ3GEY0R00V	0 1/16W	[M]
RJ704	ERJ3GEY0R00V	0 1/16W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
RJ707	ERJ3GEY0R00V	0 1/16W	[M]
RJ708	ERJ3GEY0R00V	0 1/16W	[M]
RJ709	ERJ3GEY0R00V	0 1/16W	[M]
RJ711	ERJ3GEY0R00V	0 1/16W	[M]
RJ712	ERJ3GEY0R00V	0 1/16W	[M]
RJ713	ERJ3GEY0R00V	0 1/16W	[M]
RJ714	ERJ3GEY0R00V	0 1/16W	[M]
RJ715	ERJ3GEY0R00V	0 1/16W	[M]
RJ716	ERJ3GEY0R00V	0 1/16W	[M]
RJ717	ERJ3GEY0R00V	0 1/16W	[M]
RJ718	ERJ3GEY0R00V	0 1/16W	[M]
RJ719	ERJ3GEY0R00V	0 1/16W	[M]
RJ720	ERJ3GEY0R00V	0 1/16W	[M]
RJ721	ERJ3GEY0R00V	0 1/16W	[M]
RJ722	ERJ3GEY0R00V	0 1/16W	[M]
RJ723	ERJ3GEY0R00V	0 1/16W	[M]
RJ724	ERJ3GEY0R00V	0 1/16W	[M]
RJ725	ERJ3GEY0R00V	0 1/16W	[M]
RJ726	ERJ3GEY0R00V	0 1/16W	[M]
RJ727	ERJ3GEY0R00V	0 1/16W	[M]
RJ728	ERJ3GEY0R00V	0 1/16W	[M]
RJ729	ERJ3GEY0R00V	0 1/16W	[M]
RJ731	ERJ3GEY0R00V	0 1/16W	[M]
RJ732	ERJ3GEY0R00V	0 1/16W	[M]
RJ733	ERJ3GEY0R00V	0 1/16W	[M]
RJ734	ERJ3GEY0R00V	0 1/16W	[M]
RJ735	ERJ3GEY0R00V	0 1/16W	[M]
RJ736	ERJ3GEY0R00V	0 1/16W	[M]
RJ738	ERJ3GEY0R00V	0 1/16W	[M]

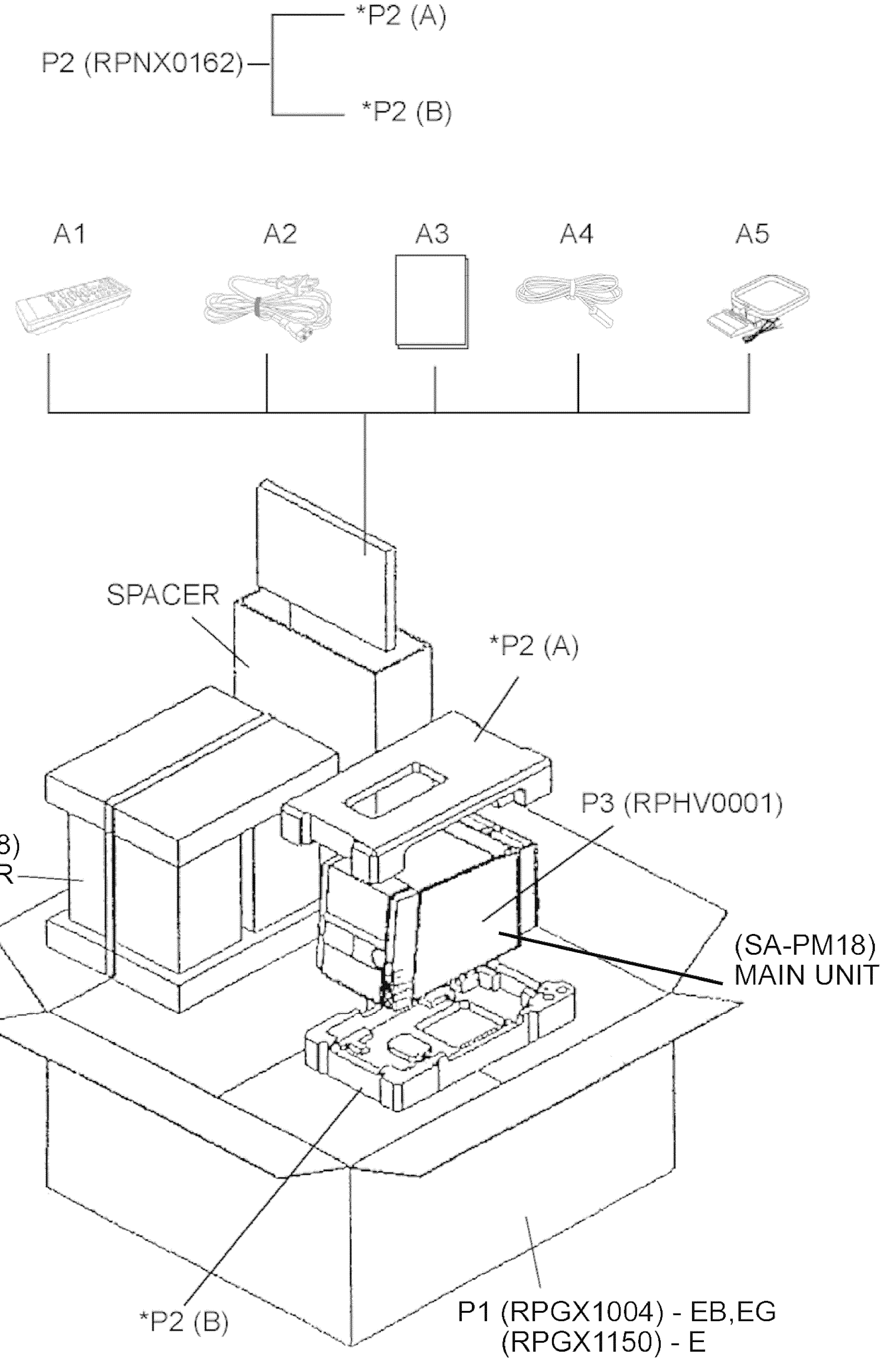
20.5. Packing Materials & Accessories Parts List

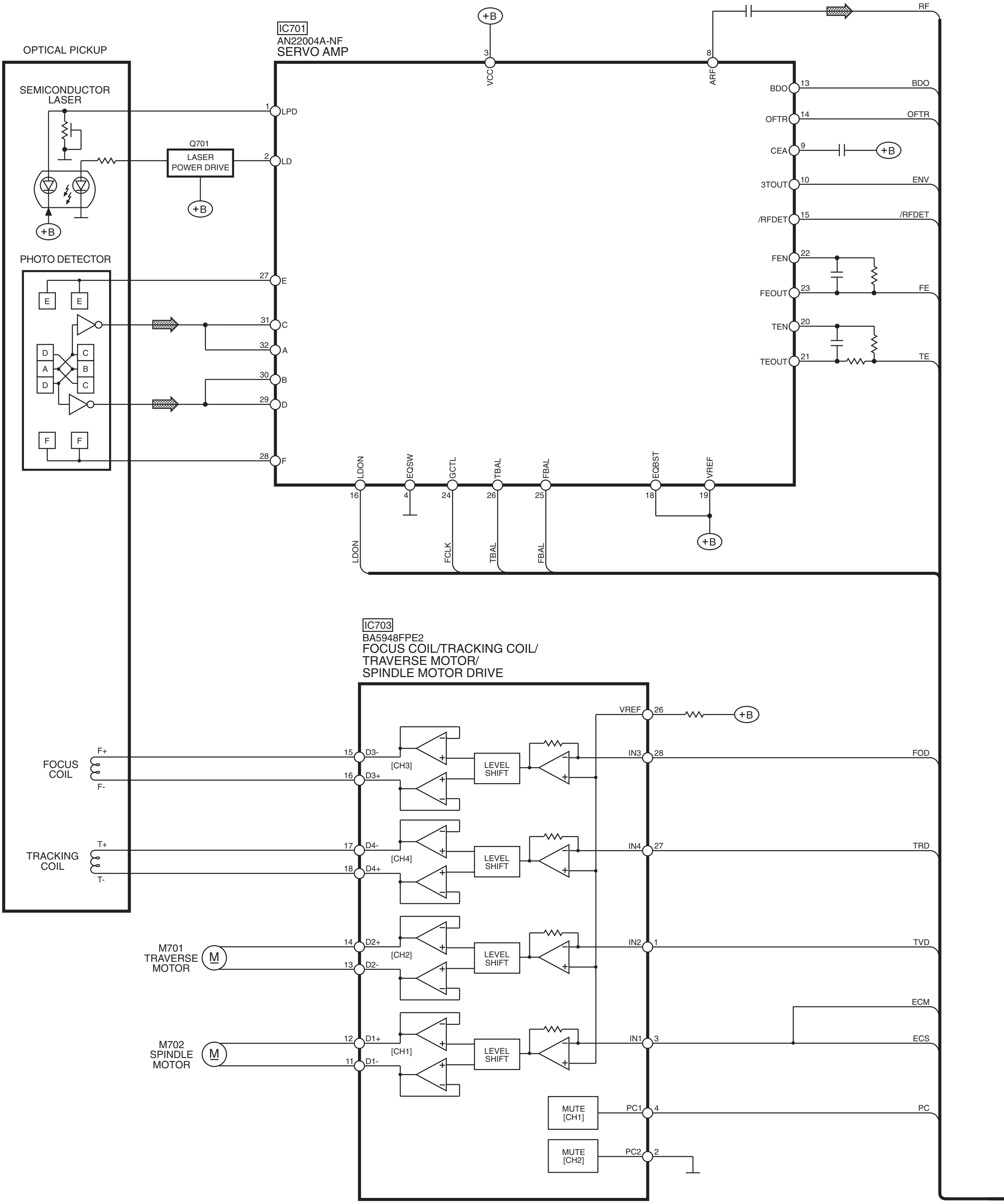
Ref. No.	Part No.	Part Name & Description	Remarks
		PACKING MATERIALS	
P1	RPGX1004	PACKING CASE	[M]EB EG
P1	RPGX1150	PACKING CASE	[M]E
P2	RPNX0162	POLYFOAM	[M]
P3	RPHV0001	MIRAMAT	[M]
		ACCESSORIES	
A1	EUR7711020	REMOTE CONTROL	[M]
A1-1	UR64EC2337J	R/C BATTERY COVER	[M]
A2	RJA0019-2K	AC CORD (SF)	[M]EG E ⚠
A2	VJA0733	AC CORD (SF)	[M]EB ⚠
A3	RQT6686-B	O/I BOOK (En)	[M]EB E
A3	RQT6687-E	O/I BOOK(Sp/Ru/Cz/Po)	[M]E
A3	RQT6688-D	O/I BOOK (Ge/It/Fr)	[M]EG
A3	RQT6689-H	O/I BOOK (Du/Da/Sw)	[M]EG
A4	RSA0007-L	FM ANTENNA	[M]
A5	RSA0033A	AM LOOP ANTENNA	[M]
A6	K1YZ02000013	ANTENNA ADAPTER	[M]EB

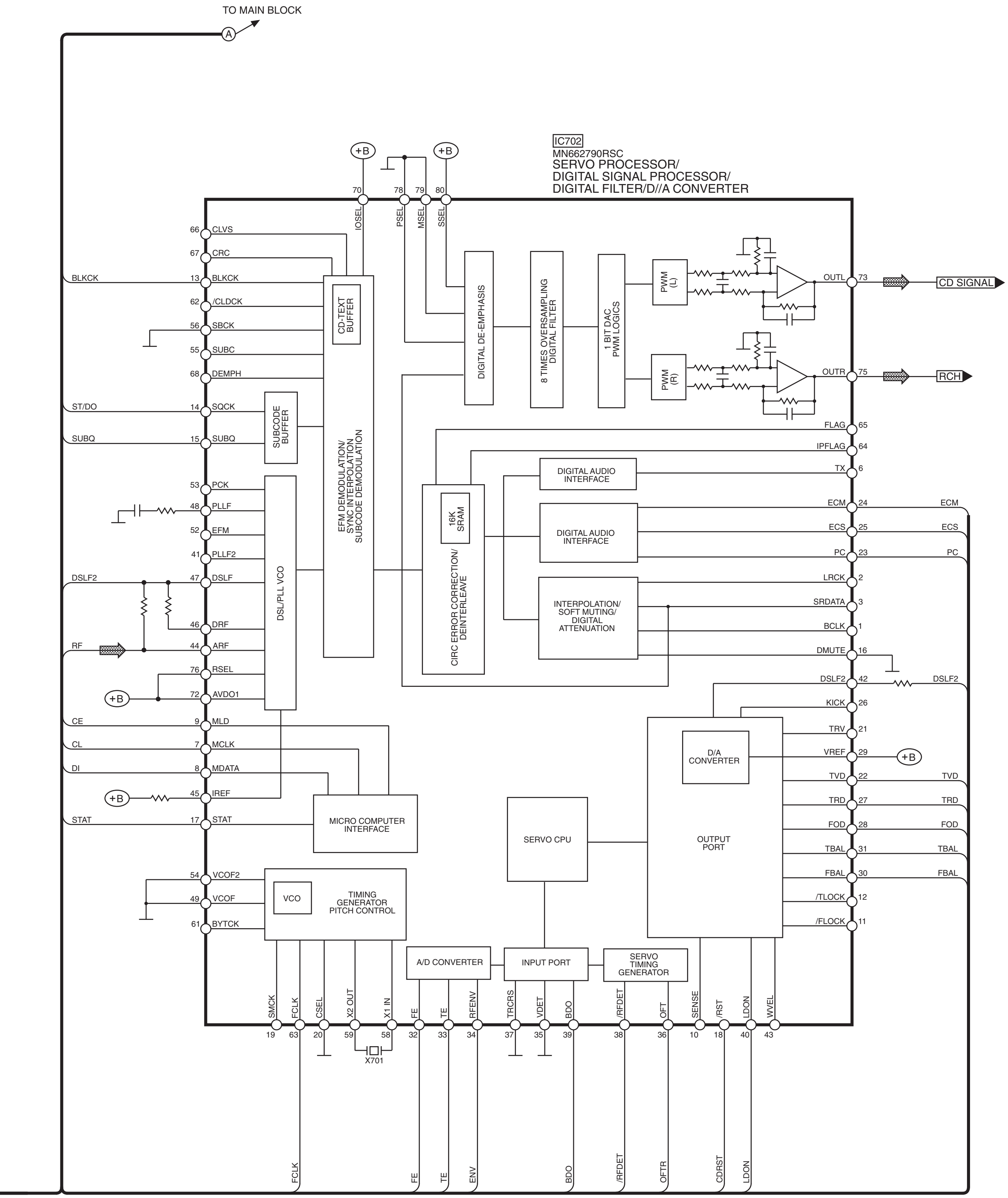
20.6. Packaging

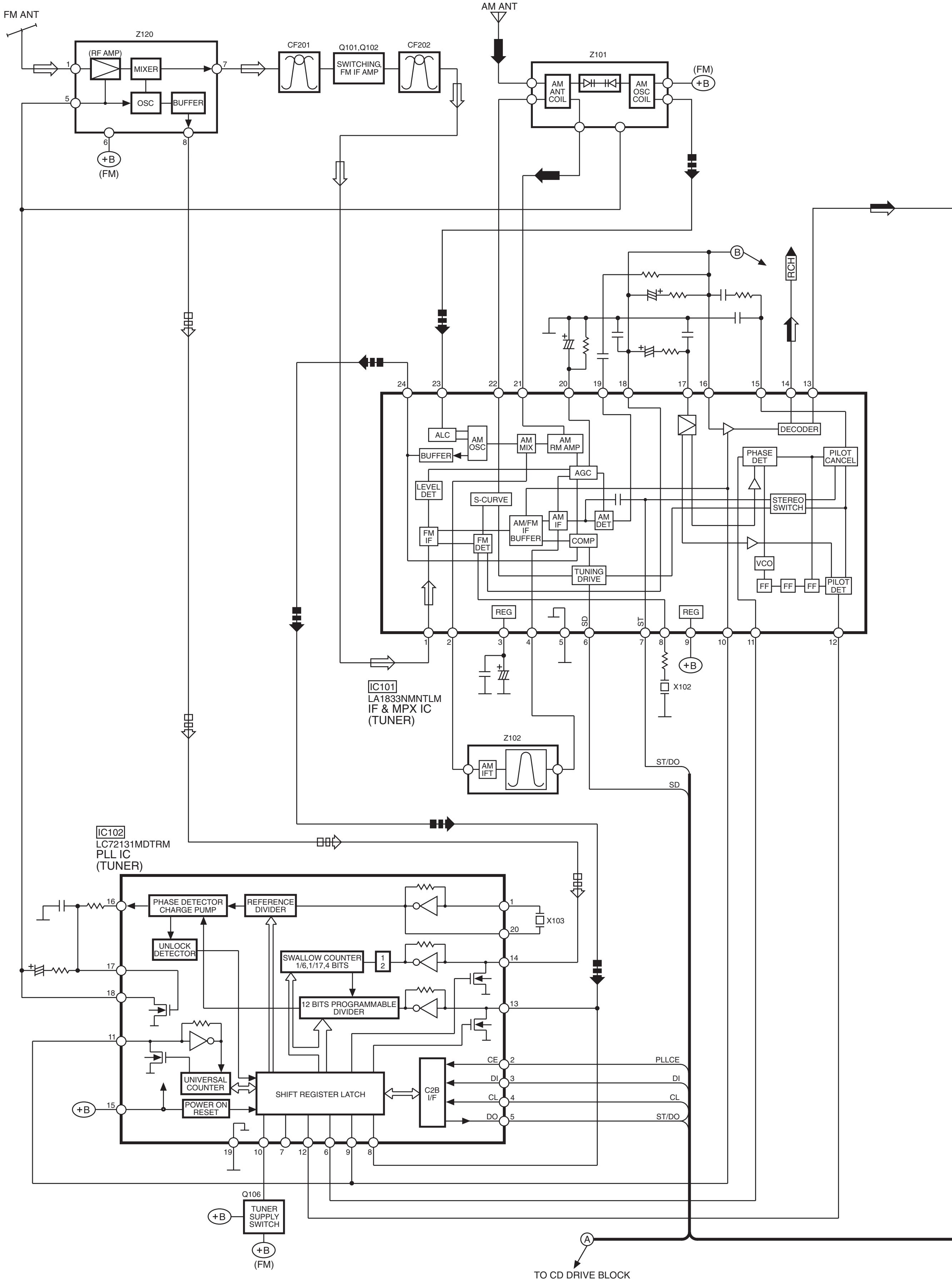
ACCESSORIES CASE

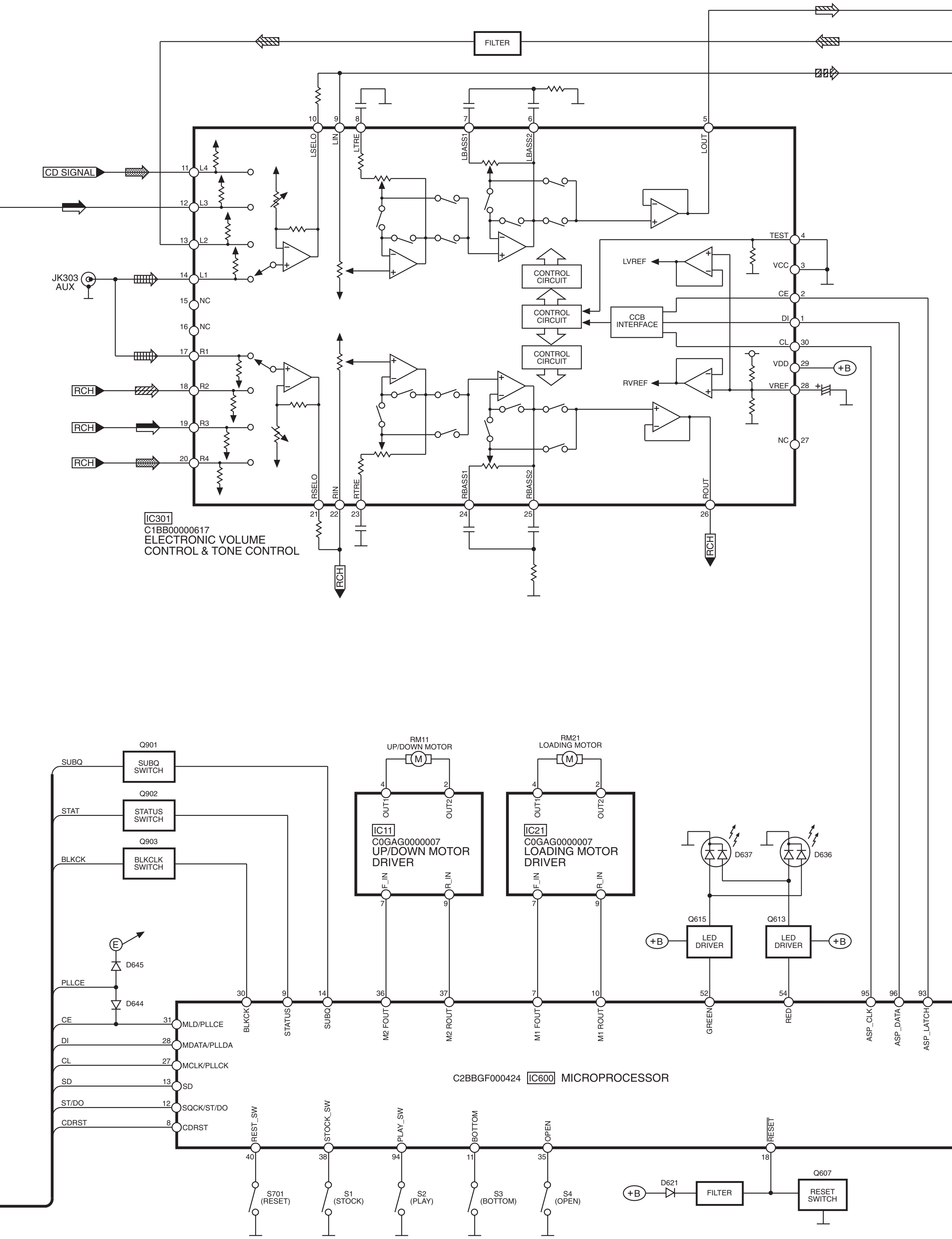
A1 : REMOTE CONTROL
A2 : AC CORD
A3 : O/I BOOK
A4 : FM ANTENNA WIRE
A5 : AM LOOP ANTENNA

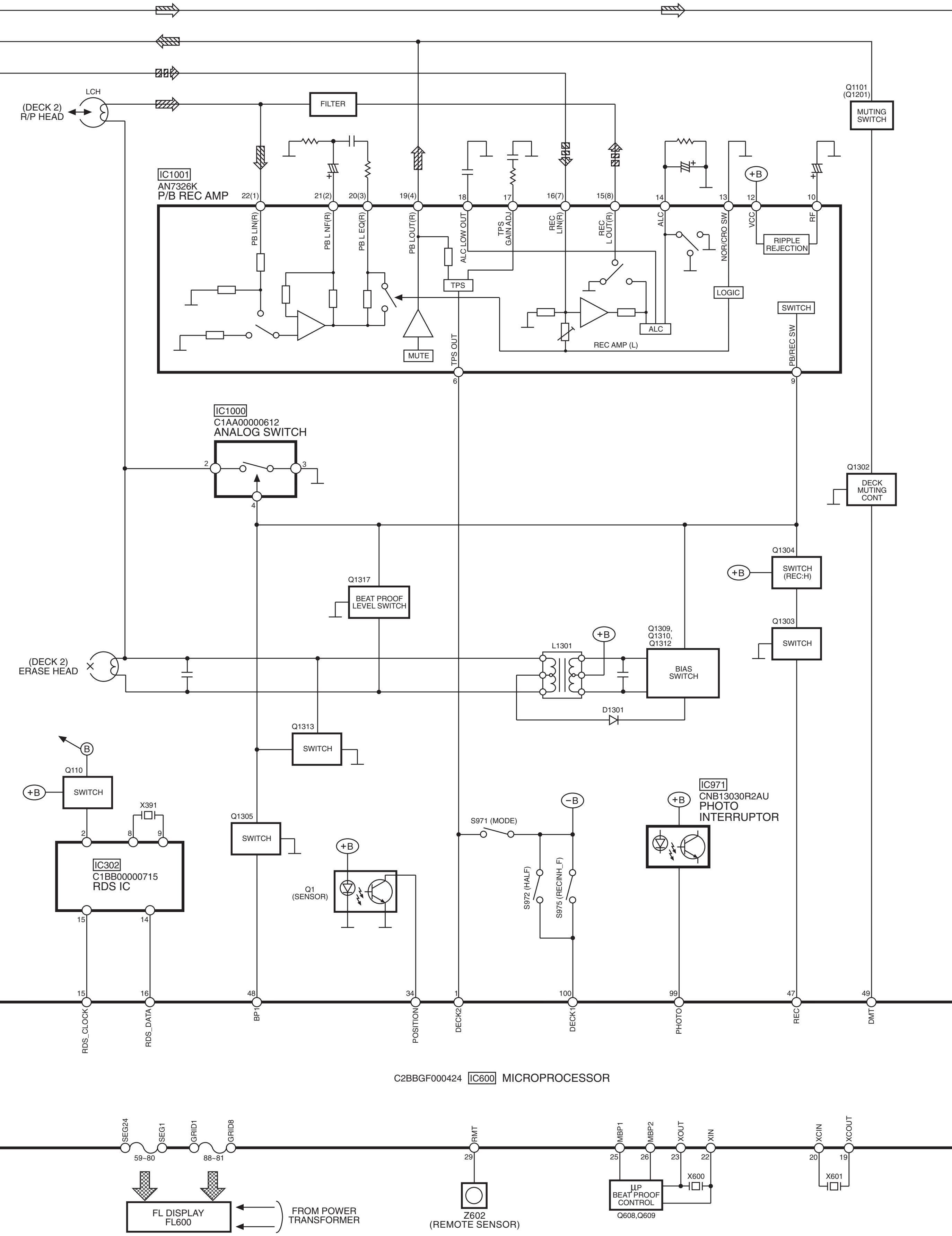

*P2 (A)
P2 (RPNX0162)
*P2 (B)
A1
A2
A3
A4
A5
SPACER
*P2 (A)
P3 (RPHV0001)
(SB-PM18) SPEAKER UNIT
(SA-PM18) MAIN UNIT
*P2 (B)
P1 (RPGX1004) - EB,EG
(RPGX1150) - E

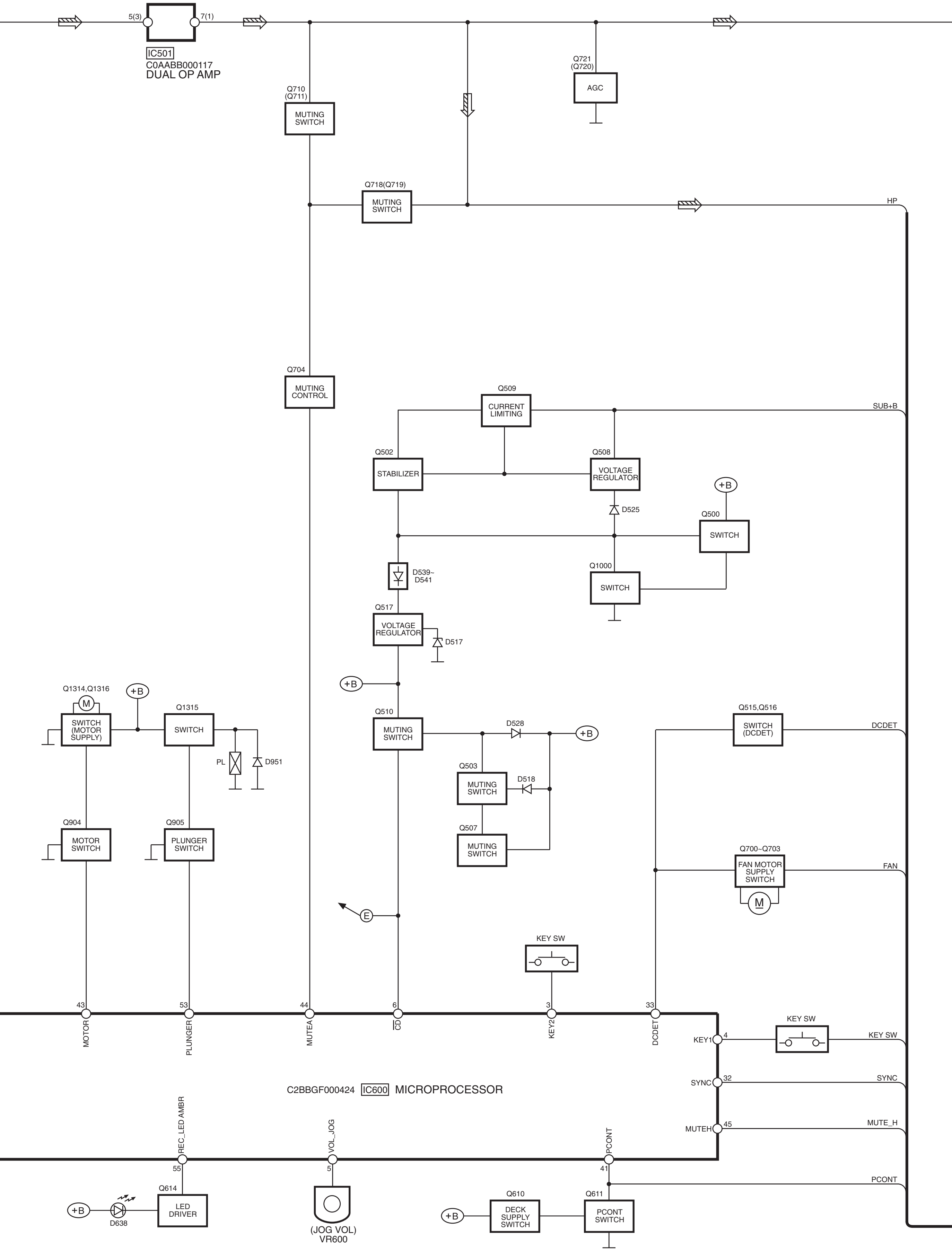

OPTICAL PICKUP
SEMICONDUCTOR LASER
+B
PHOTO DETECTOR
E
E
D
A
D
C
B
C
F
F
Q701
LASER POWER DRIVE
+B
IC701
AN22004A-NF
SERVO AMP
+B
3
VCC
8
ARF
RF
1 LPD
2 LD
27 E
31 C
32 A
30 B
29 D
28 F
BDO 13 BDO
OFTR 14 OFTR
CEA 9 +B
3TOUT 10 ENV
/RFDET 15 /RFDET
FEN 22
FEOUT 23 FE
TEN 20
TEOUT 21 TE
LDON 16
EQSW 4
GCTL 24
TBAL 26
FBAL 25
EQBST 18
VREF 19
+B
LDON
FCLK
TBAL
FBAL
IC703
BA5948FPE2
FOCUS COIL/TRACKING COIL/
TRAVERSE MOTOR/
SPINDLE MOTOR DRIVE
FOCUS COIL
F+
F-
15 D3-
16 D3+
[CH3]
LEVEL SHIFT
TRACKING COIL
T+
T-
17 D4-
18 D4+
[CH4]
LEVEL SHIFT
M701 TRAVERSE MOTOR
M
14 D2+
13 D2-
[CH2]
LEVEL SHIFT
M702 SPINDLE MOTOR
M
12 D1+
11 D1-
[CH1]
LEVEL SHIFT
VREF 26 +B
IN3 28 FOD
IN4 27 TRD
IN2 1 TVD
ECM
IN1 3 ECS
MUTE [CH1]
PC1 4 PC
MUTE [CH2]
PC2 2

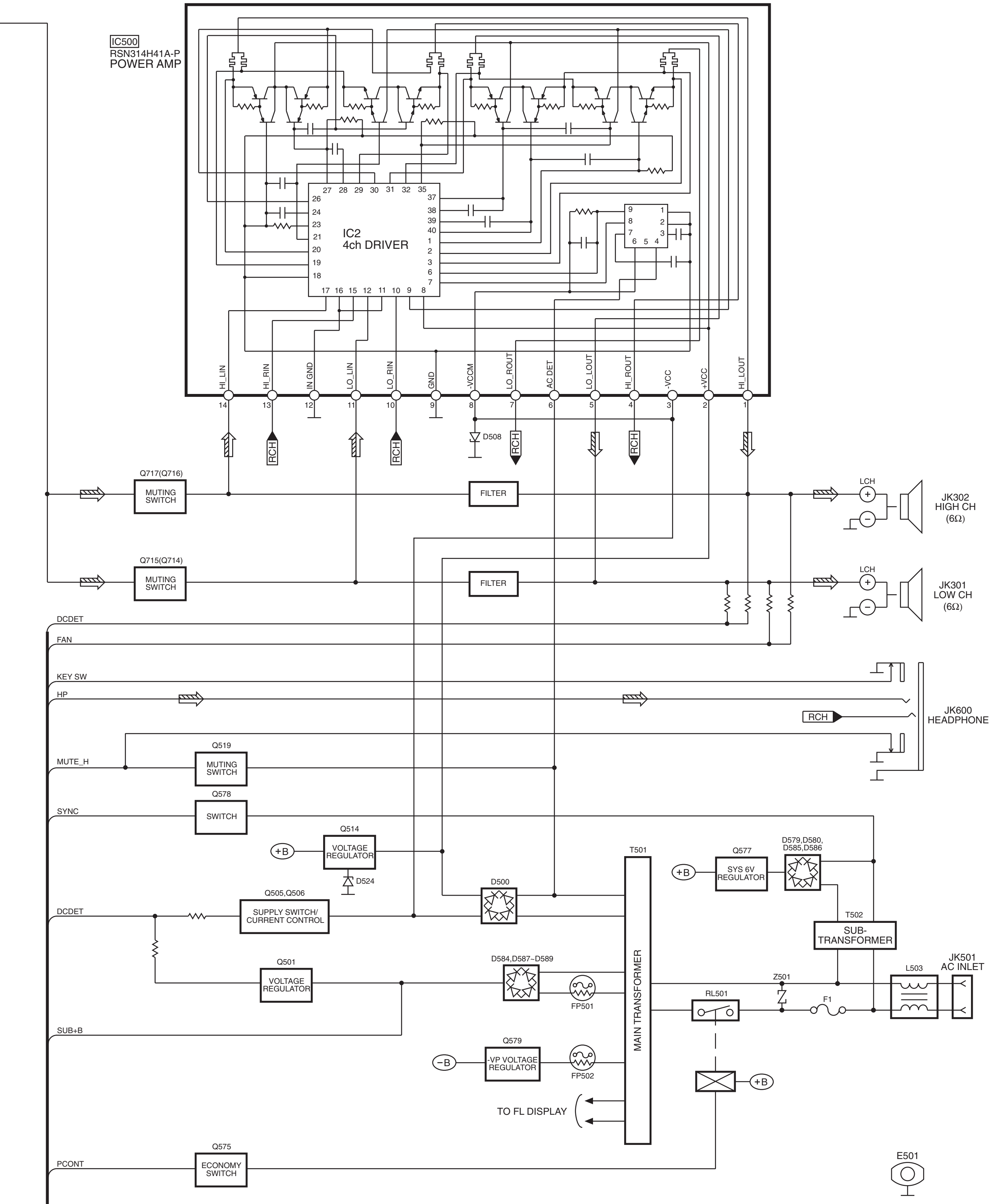

TO MAIN BLOCK
A
IC702
MN662790RSC
SERVO PROCESSOR/
DIGITAL SIGNAL PROCESSOR/
DIGITAL FILTER/D//A CONVERTER
+B
70 IOSEL
78 PSEL
79 MSEL
80 SSEL
66 CLVS
67 CRC
BLKCK 13 BLKCK
62 /CLDCK
56 SBCK
55 SUBC
68 DEMPH
ST/DO 14 SQCK
SUBQ 15 SUBQ
53 PCK
48 PLLF
52 EFM
41 PLLF2
DSLF2 47 DSLF
46 DRF
RF 44 ARF
76 RSEL
72 AVDO1
CE 9 MLD
CL 7 MCLK
DI 8 MDATA
45 IREF
STAT 17 STAT
54 VCOF2
49 VCOF
61 BYTCK
CD-TEXT BUFFER
SUBCODE BUFFER
EFM DEMODULATION/ SYNC INTERPOLATION SUBCODE DEMODULATION
DSL/PLL VCO
MICRO COMPUTER INTERFACE
VCO
TIMING GENERATOR PITCH CONTROL
DIGITAL DE-EMPHASIS
8 TIMES OVERSAMPLING DIGITAL FILTER
1 BIT DAC PWM LOGICS
PWM (L)
PWM (R)
OUTL 73
CD SIGNAL
OUTR 75
RCH
FLAG 65
IPFLAG 64
TX 6
DIGITAL AUDIO INTERFACE
16K SRAM
CIRC ERROR CORRECTION/ DEINTERLEAVE
ECM 24 ECM
ECS 25 ECS
PC 23 PC
DIGITAL AUDIO INTERFACE
LRCK 2
SRDATA 3
BCLK 1
DMUTE 16
INTERPOLATION/ SOFT MUTING/ DIGITAL ATTENUATION
DSLF2 42 DSLF2
KICK 26
TRV 21
VREF 29
D/A CONVERTER
TVD 22 TVD
TRD 27 TRD
FOD 28 FOD
TBAL 31 TBAL
FBAL 30 FBAL
/TLOCK 12
/FLOCK 11
SERVO CPU
OUTPUT PORT
A/D CONVERTER
INPUT PORT
SERVO TIMING GENERATOR
SMCK 19
FCLK 63
CSEL 20
X2 OUT 59
X1 IN 58
X701
FE 32
TE 33
RFENV 34
TRCRS 37
VDET 35
BDO 39
/RFDET 38
OFT 36
SENSE 10
/RST 18
LDON 40
WVEL 43
FCLK
FE
TE
ENV
BDO
/RFDET
OFTR
CDRST
LDON


FM ANT
Z120
(RF AMP)
MIXER
OSC
BUFFER
+B
(FM)
CF201
Q101,Q102
SWITCHING, FM IF AMP
CF202
AM ANT
Z101
AM ANT COIL
AM OSC COIL
(FM)
+B
B
RCH
ALC
AM OSC
BUFFER
AM MIX
AM RM AMP
AGC
LEVEL DET
S-CURVE
FM IF
FM DET
AM/FM IF BUFFER
AM IF
AM DET
COMP
TUNING DRIVE
DECODER
PHASE DET
PILOT CANCEL
STEREO SWITCH
VCO
FF
FF
FF
PILOT DET
REG
REG
SD
ST
+B
X102
IC101
LA1833NMNTLM
IF & MPX IC
(TUNER)
Z102
AM IFT
ST/DO
SD
IC102
LC72131MDTRM
PLL IC
(TUNER)
PHASE DETECTOR CHARGE PUMP
REFERENCE DIVIDER
UNLOCK DETECTOR
SWALLOW COUNTER 1/6,1/17,4 BITS
1/2
12 BITS PROGRAMMABLE DIVIDER
UNIVERSAL COUNTER
POWER ON RESET
SHIFT REGISTER LATCH
C2B I/F
X103
CE
DI
CL
DO
PLLCE
DI
CL
ST/DO
+B
Q106
TUNER SUPPLY SWITCH
+B
(FM)
A
TO CD DRIVE BLOCK


FILTER
CD SIGNAL
JK303
AUX
RCH
RCH
RCH
L4
L3
L2
L1
NC
NC
R1
R2
R3
R4
11
12
13
14
15
16
17
18
19
20
10
9
8
7
6
5
LSELO
LIN
LTRE
LBASS1
LBASS2
LOUT
TEST
VCC
CE
DI
CL
VDD
VREF
NC
4
3
2
1
30
29
28
27
+B
LVREF
RVREF
CONTROL
CIRCUIT
CONTROL
CIRCUIT
CONTROL
CIRCUIT
CCB
INTERFACE
RSELO
RIN
RTRE
RBASS1
RBASS2
ROUT
21
22
23
24
25
26
RCH
RCH
IC301
C1BB00000617
ELECTRONIC VOLUME
CONTROL & TONE CONTROL
Q901
SUBQ
SWITCH
Q902
STATUS
SWITCH
Q903
BLKCLK
SWITCH
SUBQ
STAT
BLKCK
RM11
UP/DOWN MOTOR
M
RM21
LOADING MOTOR
M
4
2
OUT1
OUT2
IC11
C0GAG0000007
UP/DOWN MOTOR
DRIVER
F_IN
R_IN
7
9
4
2
OUT1
OUT2
IC21
C0GAG0000007
LOADING MOTOR
DRIVER
F_IN
R_IN
7
9
D637
D636
Q615
LED
DRIVER
Q613
LED
DRIVER
+B
+B
E
D645
PLLCE
D644
CE
DI
CL
SD
ST/DO
CDRST
31 MLD/PLLCE
28 MDATA/PLLDA
27 MCLK/PLLCK
13 SD
12 SQCK/ST/DO
8 CDRST
30 BLKCK
9 STATUS
14 SUBQ
36 M2 FOUT
37 M2 ROUT
7 M1 FOUT
10 M1 ROUT
52 GREEN
54 RED
95 ASP_CLK
96 ASP_DATA
93 ASP_LATCH
C2BBGF000424
IC600
MICROPROCESSOR
40 REST_SW
38 STOCK_SW
94 PLAY_SW
11 BOTTOM
35 OPEN
18 RESET
S701
(RESET)
S1
(STOCK)
S2
(PLAY)
S3
(BOTTOM)
S4
(OPEN)
+B
D621
FILTER
Q607
RESET
SWITCH


LCH
(DECK 2)
R/P HEAD
FILTER
Q1101
(Q1201)
MUTING
SWITCH
IC1001
AN7326K
P/B REC AMP
22(1)
21(2)
20(3)
19(4)
18
17
16(7)
15(8)
14
13
12
10
+B
PB LIN(R)
PB L NF(R)
PB L EQ(R)
PB LOUT(R)
ALC LOW OUT
TPS
GAIN ADJ
REC
LIN(R)
REC
L OUT(R)
ALC
NOR/CRO SW
VCC
RF
RIPPLE
REJECTION
TPS
LOGIC
SWITCH
ALC
MUTE
REC AMP (L)
TPS OUT
PB/REC SW
6
9
IC1000
C1AA00000612
ANALOG SWITCH
2
3
4
Q1302
DECK
MUTING
CONT
Q1304
+B
SWITCH
(REC:H)
Q1317
BEAT PROOF
LEVEL SWITCH
Q1303
SWITCH
L1301
+B
Q1309,
Q1310,
Q1312
BIAS
SWITCH
(DECK 2)
ERASE HEAD
D1301
Q1313
SWITCH
B
Q110
+B
SWITCH
X391
2
8
9
IC302
C1BB00000715
RDS IC
15
14
Q1305
SWITCH
+B
Q1
(SENSOR)
S971 (MODE)
−B
S972 (HALF)
S975 (RECINH_F)
+B
IC971
CNB13030R2AU
PHOTO
INTERRUPTOR
15
16
48
34
1
100
99
47
49
RDS_CLOCK
RDS_DATA
BP1
POSITION
DECK2
DECK1
PHOTO
REC
DMT
C2BBGF000424
IC600
MICROPROCESSOR
SEG24
SEG1
GRID1
GRID8
59~80
88~81
RMT
29
MBP1
MBP2
XOUT
XIN
25
26
23
22
XCIN
XCOUT
20
19
X600
X601
μP
BEAT PROOF
CONTROL
Q608,Q609
FL DISPLAY
FL600
FROM POWER
TRANSFORMER
Z602
(REMOTE SENSOR)


5(3)
7(1)
IC501
C0AABB000117
DUAL OP AMP
Q721
(Q720)
AGC
Q710
(Q711)
MUTING SWITCH
Q718(Q719)
MUTING SWITCH
HP
Q704
MUTING CONTROL
Q509
CURRENT LIMITING
SUB+B
Q502
STABILIZER
Q508
VOLTAGE REGULATOR
D525
+B
Q500
SWITCH
Q1000
SWITCH
D539~
D541
Q517
VOLTAGE REGULATOR
D517
+B
Q1314,Q1316
M
+B
Q1315
SWITCH
SWITCH (MOTOR SUPPLY)
PL
D951
Q510
MUTING SWITCH
D528
+B
Q503
MUTING SWITCH
D518
Q507
MUTING SWITCH
Q515,Q516
SWITCH (DCDET)
DCDET
Q904
MOTOR SWITCH
Q905
PLUNGER SWITCH
Q700~Q703
FAN MOTOR SUPPLY SWITCH
M
FAN
E
KEY SW
43
53
44
6
3
33
MOTOR
PLUNGER
MUTEA
CD
KEY2
DCDET
KEY1
4
KEY SW
KEY SW
SYNC
32
SYNC
MUTEH
45
MUTE_H
C2BBGF000424
IC600
MICROPROCESSOR
REC_LED AMBR
VOL_JOG
PCONT
55
5
41
PCONT
Q614
LED DRIVER
+B
D638
(JOG VOL)
VR600
Q610
DECK SUPPLY SWITCH
Q611
PCONT SWITCH
+B


IC500
RSN314H41A-P
POWER AMP
IC2
4ch DRIVER
27 28 29 30 31 32 35
26 24 23 21 20 19 18
37 38 39 40 1 2 3 6 7
17 16 15 12 11 10 9 8
9 8 7 6 5 4 1 2 3
HI_LIN
HI_RIN
IN GND
LO_LIN
LO_RIN
GND
-VCCM
LO_ROUT
AC DET
LO_LOUT
HI_ROUT
-VCC
+VCC
HI_LOUT
14 13 12 11 10 9 8 7 6 5 4 3 2 1
D508
RCH
Q717(Q716)
MUTING SWITCH
FILTER
Q715(Q714)
MUTING SWITCH
FILTER
LCH
JK302
HIGH CH
(6Ω)
LCH
JK301
LOW CH
(6Ω)
DCDET
FAN
KEY SW
HP
RCH
JK600
HEADPHONE
MUTE_H
Q519
MUTING SWITCH
SYNC
Q578
SWITCH
Q514
VOLTAGE REGULATOR
+B
D524
D500
T501
Q577
SYS 6V REGULATOR
+B
D579,D580,
D585,D586
Q505,Q506
SUPPLY SWITCH/
CURRENT CONTROL
DCDET
T502
SUB-
TRANSFORMER
Q501
VOLTAGE REGULATOR
D584,D587~D589
FP501
MAIN TRANSFORMER
Z501
RL501
F1
L503
JK501
AC INLET
SUB+B
Q579
-B
-VP VOLTAGE REGULATOR
FP502
+B
TO FL DISPLAY
Q575
PCONT
ECONOMY SWITCH
E501

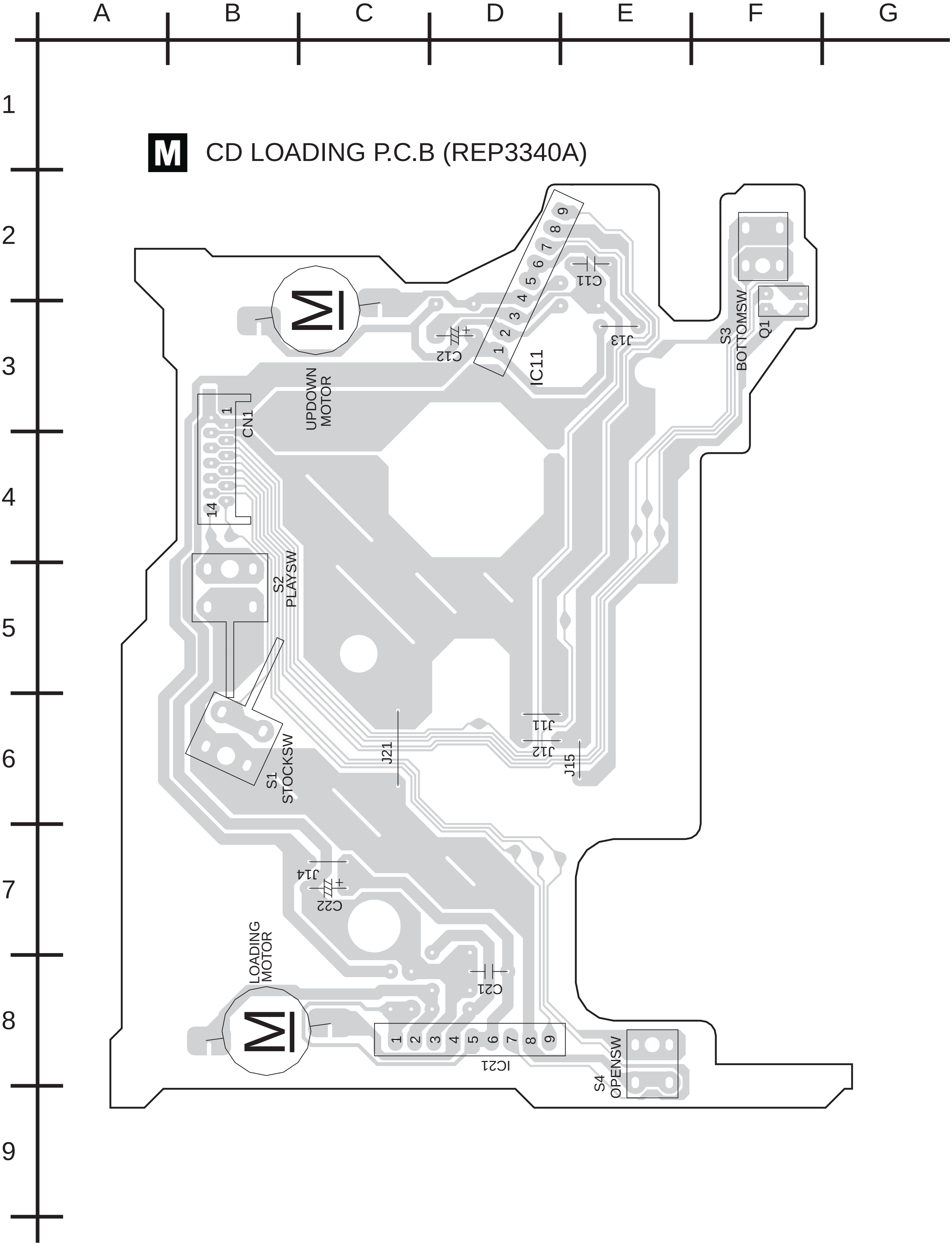
SIGNAL LINES

▨⇨ : MAIN SIGNAL LINE
➡ : AM SIGNAL LINE
▩⇨ : CD SIGNAL LINE
▨⇨ : PLAYBACK SIGNAL LINE
⇨ : FM SIGNAL LINE
■■➡ : AM OSC SIGNAL LINE
▩⇨ : CD-DA (AUDIO /VIDEO) SIGNAL LINE
▨▨⇨ : RECORD SIGNAL LINE
□□⇨ : FM OSC SIGNAL LINE
➡ : FM /AM SIGNAL LINE
▥⇨ : AUX SIGNAL LINE

( ) Indicates the Pin No. of Right Channel.

NOTE : Signal Lines are applicable to the Left Channel only.

M CD LOADING P.C.B (REP3340A)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G
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9
UPDOWN MOTOR
C12
1
2
3
4
5
6
7
8
9
IC11
C11
J13
S3 BOTTOMSW
Q1
CN1
1
14
S2 PLAYSW
S1 STOCKSW
J21
J11
J12
J15
J14
C22
LOADING MOTOR
C21
1
2
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6
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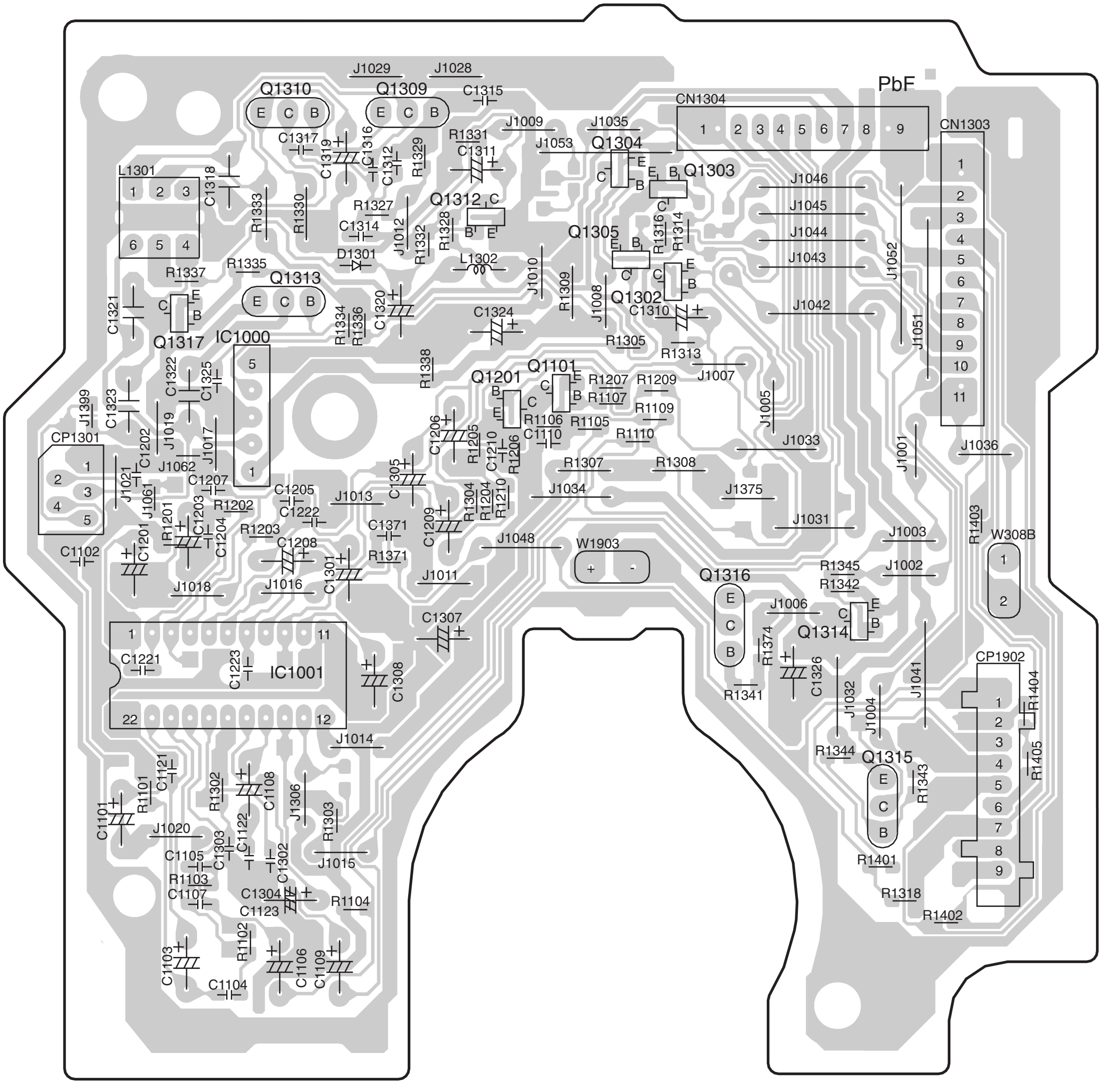
8
9
IC21
S4 OPENSW

A B C D E F G

D DECK P.C.B (REPX0350A)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PbF
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E C B
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C1315
CN1304
1 2 3 4 5 6 7 8 9
CN1303
1 2 3 4 5 6 7 8 9 10 11
J1009
J1035
J1053
Q1304
E C B
Q1303
E B C
C1317
C1319
C1316
C1312
R1329
R1331
C1311
L1301
1 2 3 6 5 4
C1318
R1333
R1330
R1327
Q1312
C B E
C1314
J1012
R1332
R1328
D1301
J1046
J1045
J1044
J1043
J1042
J1052
J1051
Q1305
E B C
R1316
R1314
Q1302
C E B
C1310
R1313
R1305
R1337
R1335
Q1313
E C B
L1302
J1010
R1309
J1008
C1321
Q1317
C E B
R1334
R1336
C1320
C1324
IC1000
5 1
R1338
Q1201
C B E
Q1101
C E B
R1207
R1107
R1209
R1109
J1007
J1005
C1322
C1325
C1323
J1399
CP1301
1 2 3 4 5
C1202
J1019
J1017
J1062
C1206
R1205
C1210
R1206
R1106
C1110
R1105
R1110
J1033
J1001
J1036
J1021
J1061
C1207
C1203
R1202
C1205
C1222
J1013
C1305
R1307
R1308
R1304
R1204
R1210
J1034
J1375
R1201
C1201
C1204
R1203
C1208
C1371
R1371
C1209
J1031
J1003
R1403
W308B
1 2
C1102
J1048
W1903
+ -
Q1316
E C B
R1345
R1342
J1002
J1018
J1016
C1301
J1011
J1006
Q1314
C B E
R1374
C1326
R1341
C1307
IC1001
1 11 22 12
C1221
C1223
C1308
J1032
J1004
J1041
CP1902
1 2 3 4 5 6 7 8 9
R1404
R1405
J1014
R1344
Q1315
E C B
R1343
R1401
R1318
R1402
C1121
R1101
C1101
R1302
C1108
J1306
R1303
J1020
J1015
C1105
C1303
C1122
C1302
R1103
C1107
C1304
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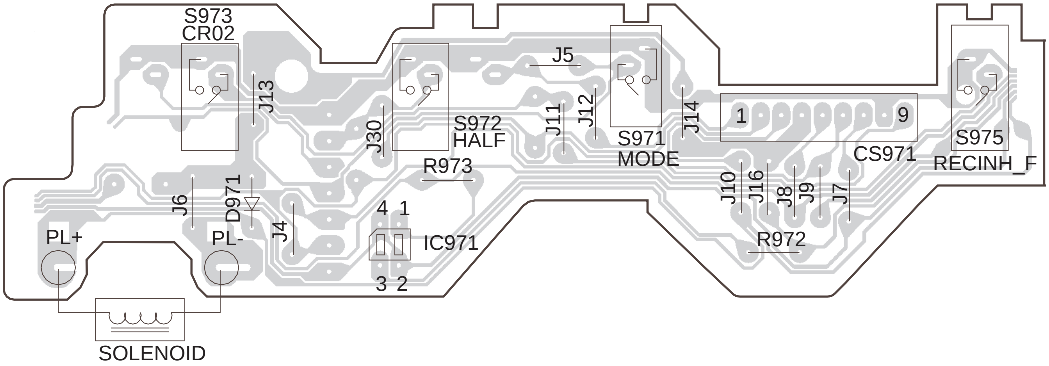
R1104
C1103
R1102
C1106
C1109
C1104

E DECK MECHANISM P.C.B (REPX0321H)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J13
J30
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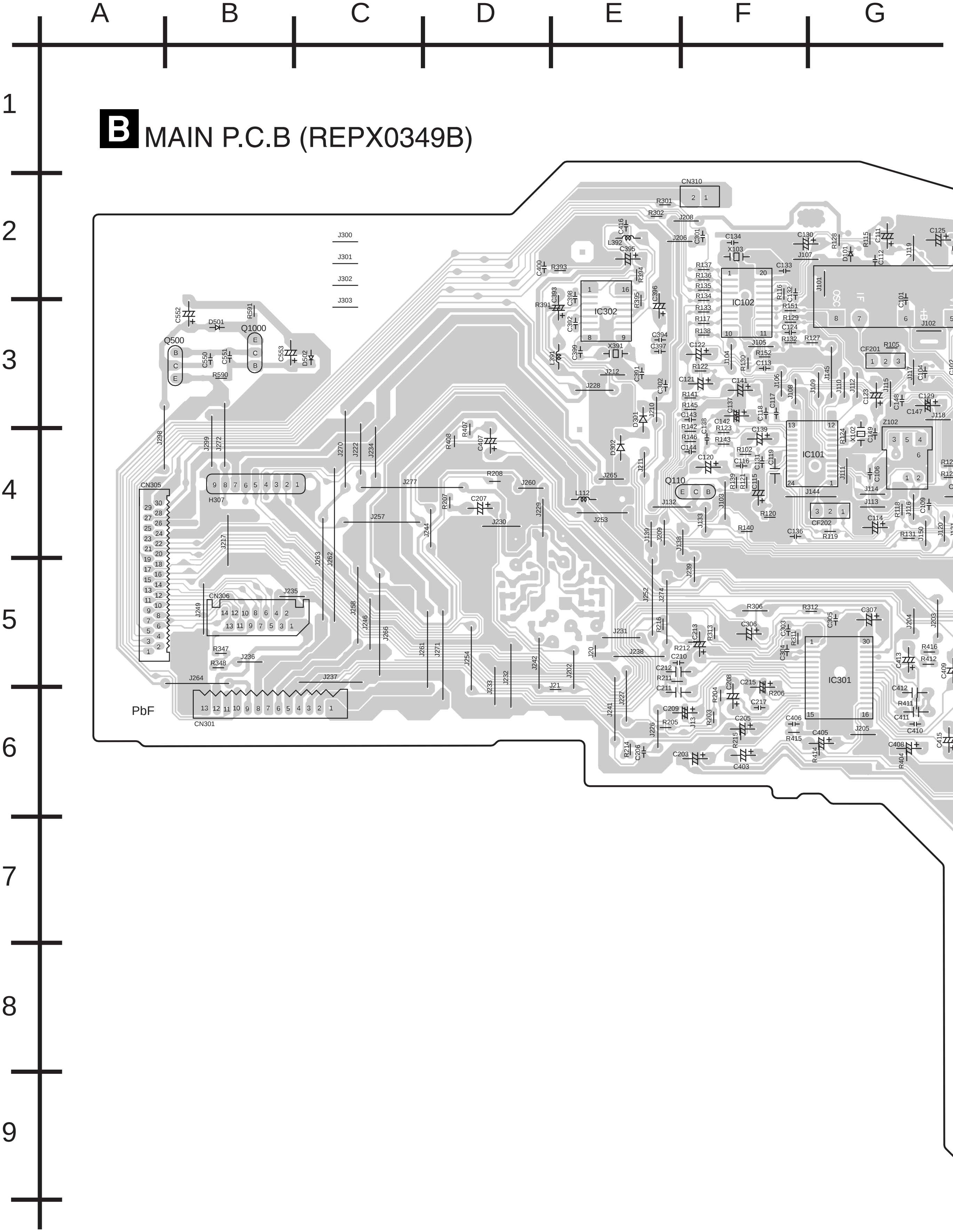
HALF
J5
J11
J12
S971
MODE
J14
1
9
CS971
S975
RECINH_F
R973
J6
D971
J4
4 1
IC971
3 2
PL+
PL-
J10
J16
J8
J9
J7
R972
SOLENOID

B MAIN P.C.B (REPX0349B)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G
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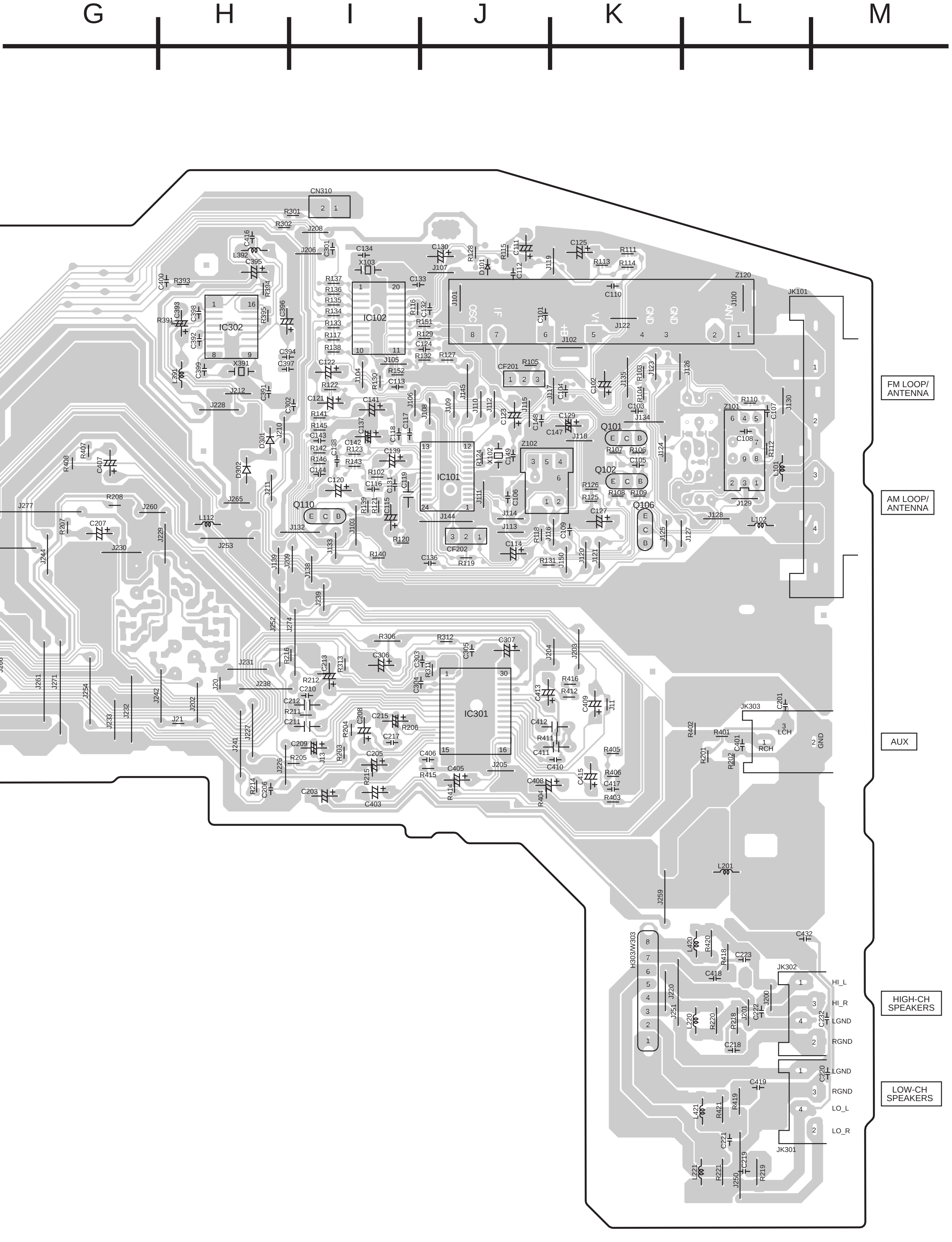
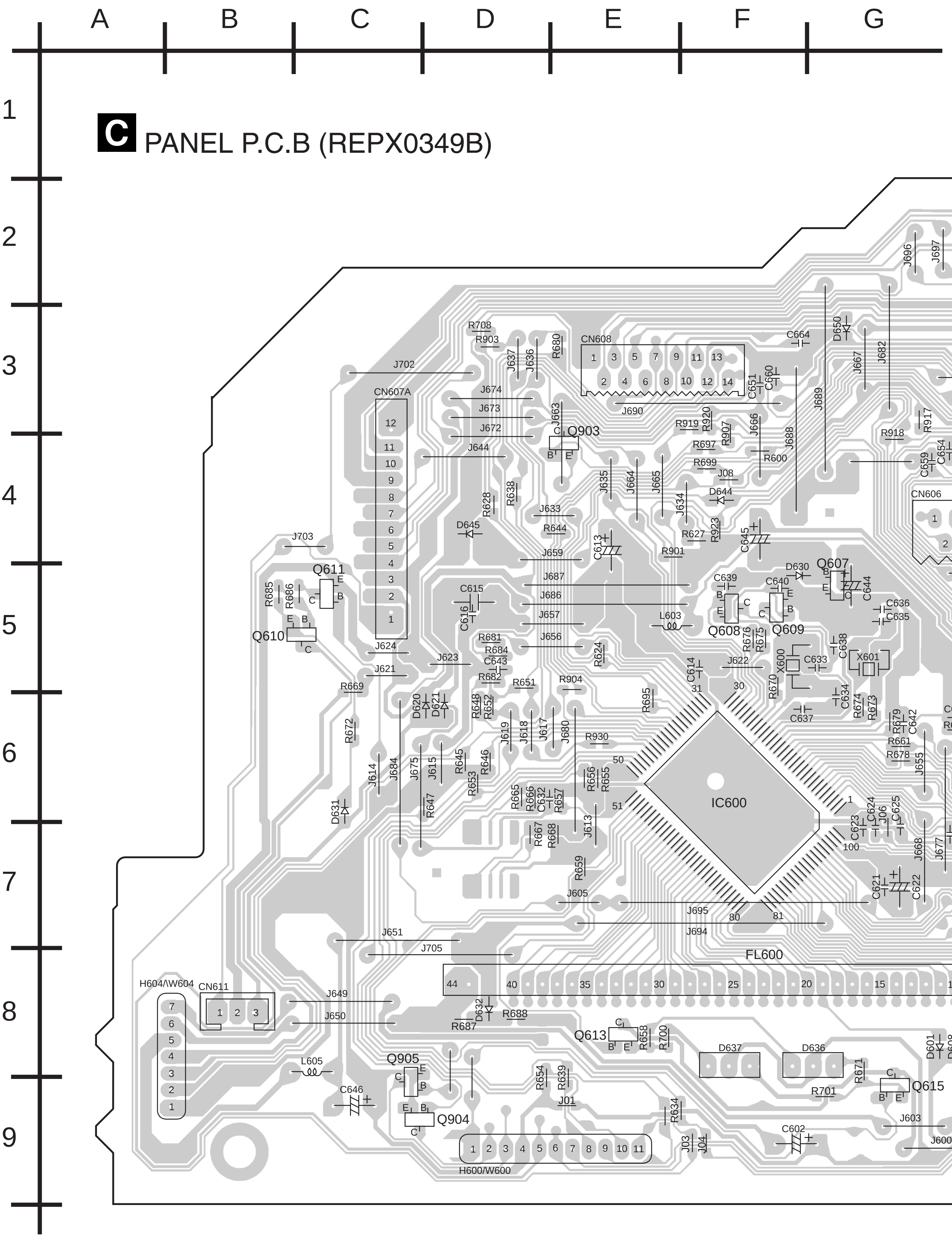
8
9
CN310
CN305
CN306
CN301
H307
IC302
IC102
IC101
IC301
Q500
Q1000
Q110
X391
X103
X102
Z102
CF201
CF202
L392
L391
L112
D501
D502
D301
D302
D101
OSC
IF
J300
J301
J302
J303
PbF


G
H
I
J
K
L
M
CN310
IC302
IC102
IC101
IC301
Z120
Z101
Z102
Q101
Q102
Q106
Q110
CF201
CF202
X103
X391
X102
JK101
FM LOOP/
ANTENNA
AM LOOP/
ANTENNA
OSC
IF
+B
Vt
GND
GND
ANT
JK303
LCH
RCH
GND
AUX
H303/W303
JK302
HI_L
HI_R
LGND
RGND
HIGH-CH
SPEAKERS
JK301
LGND
RGND
LO_L
LO_R
LOW-CH
SPEAKERS
L201
L101
L102
L112
L391
L392
L220
L221
L420
L421
D101
D301
D302

C PANEL P.C.B (REPX0349B)



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R708
R903
J637
J636
R680
CN608
1 3 5 7 9 11 13
2 4 6 8 10 12 14
C664
D650
J696
J697
J682
J667
J702
CN607A
12
11
10
9
8
7
6
5
4
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2
1
J674
J673
J672
J644
J663
Q903
C
B
E
J690
C651
C660
J689
J688
R919
R920
R907
R697
J666
R600
R699
J08
D644
R918
R917
C659
C654
CN606
J635
J664
J665
J634
J638
R628
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J633
D645
R644
C613
R627
R923
C645
R901
J703
J659
D630
Q607
C644
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C636
C635
Q610
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R681
J656
R676
R675
R684
C643
R624
C638
J624
J623
J622
X600
C633
X601
J621
R682
R651
R904
C614
31
30
R670
R669
D620
D621
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R652
R695
C634
C637
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R673
R679
C642
R672
J619
J618
J617
J680
R930
R661
R678
J614
J684
J675
J615
R645
R646
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R656
R655
J655
IC600
D631
R647
R653
R665
R666
C632
R657
51
J613
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C624
C625
C623
J06
100
R667
R668
J668
J677
R659
C621
C622
J605
J695
80
81
J694
J651
J705
FL600
44
40
35
30
25
20
15
H604/W604
CN611
1 2 3
7
6
5
4
3
2
1
J649
J650
D632
R688
R687
Q613
C
B
E
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R700
D637
D636
D601
L605
Q905
C
E
B
C646
R654
R639
R671
Q615
C
B
E
R701
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J04
J600
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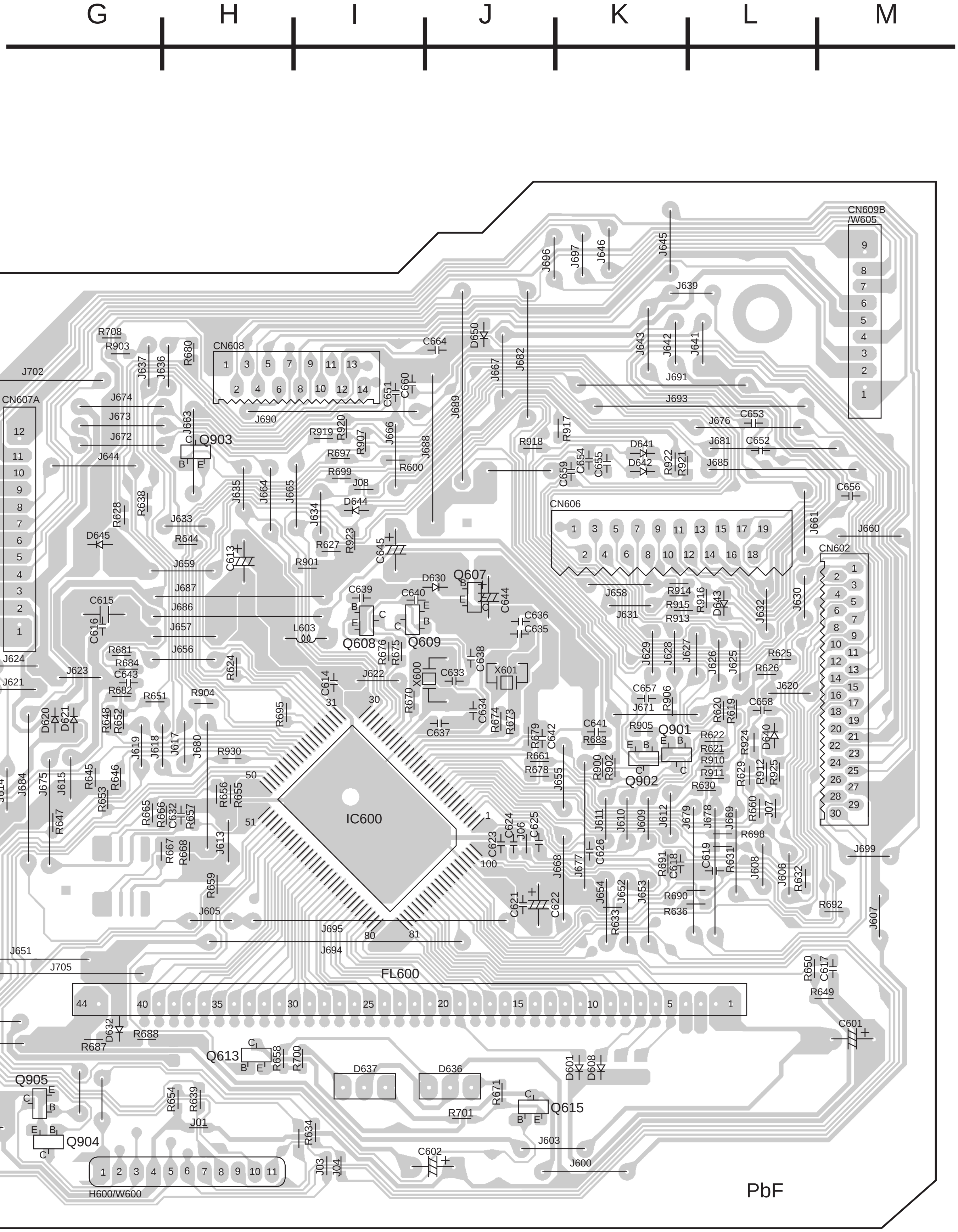
H600/W600


G
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R903
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R680
CN608
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C664
D650
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J642
J641
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CN607A
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J663
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R907
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J08
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R918
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D641
D642
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J685
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C656
J635
J664
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J634
R628
R638
J633
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R644
R627
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C613
R901
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12
14
16
18
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J686
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C636
C635
L603
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R624
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C633
X601
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C614
J624
J621
J623
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D621
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C642
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R910
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R902
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D636
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D608
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Q904
R654
R639
J01
R634
R671
R701
Q615
C602
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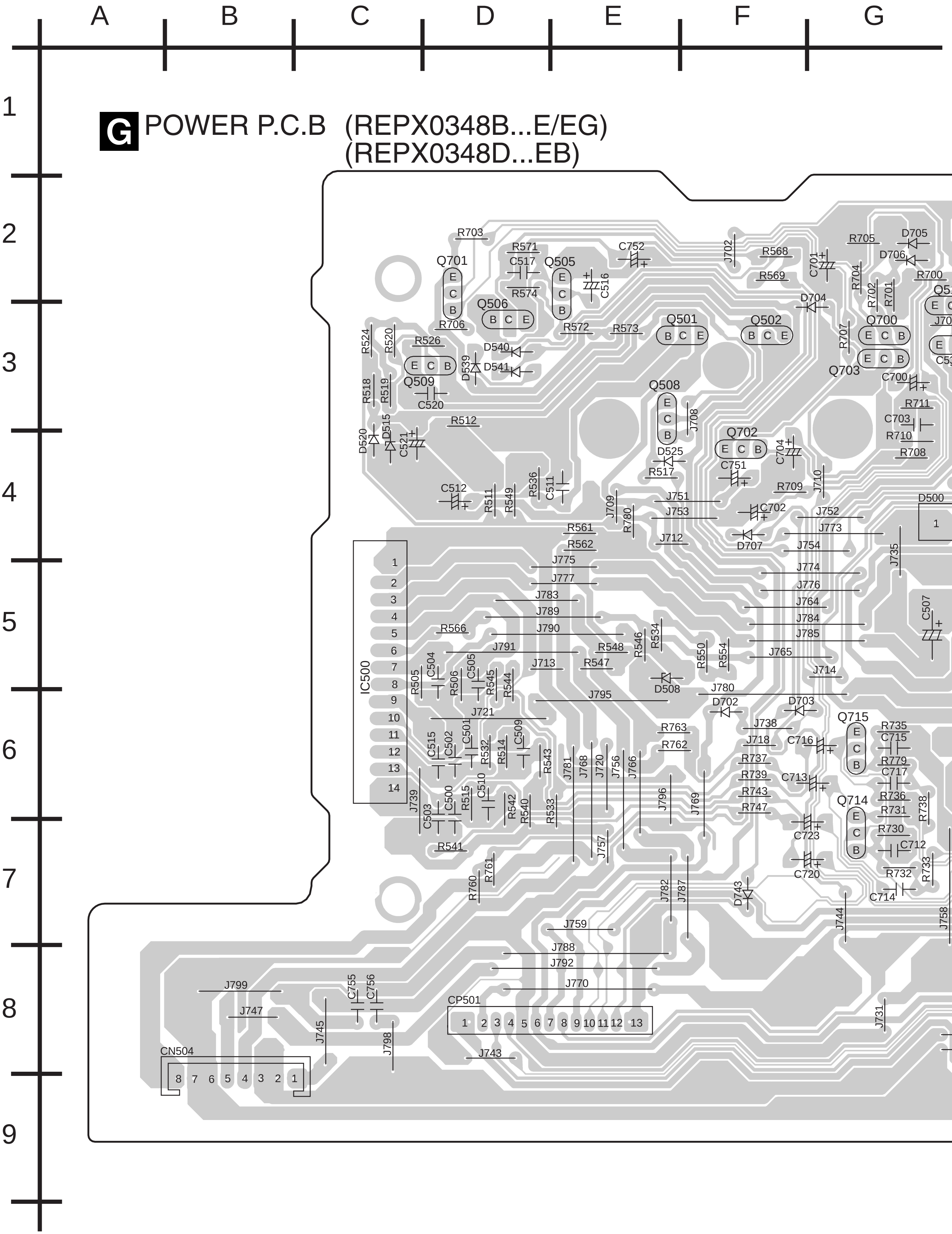
J03
J04
J600
H600/W600
PbF

G POWER P.C.B (REPX0348B...E/EG)
(REPX0348D...EB)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J702
R568
R705
D705
D706
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J776
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R506
C505
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R733
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C502
C501
R532
R514
C509
R543
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J768
J720
J756
J766
J739
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C510
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R540
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CN504
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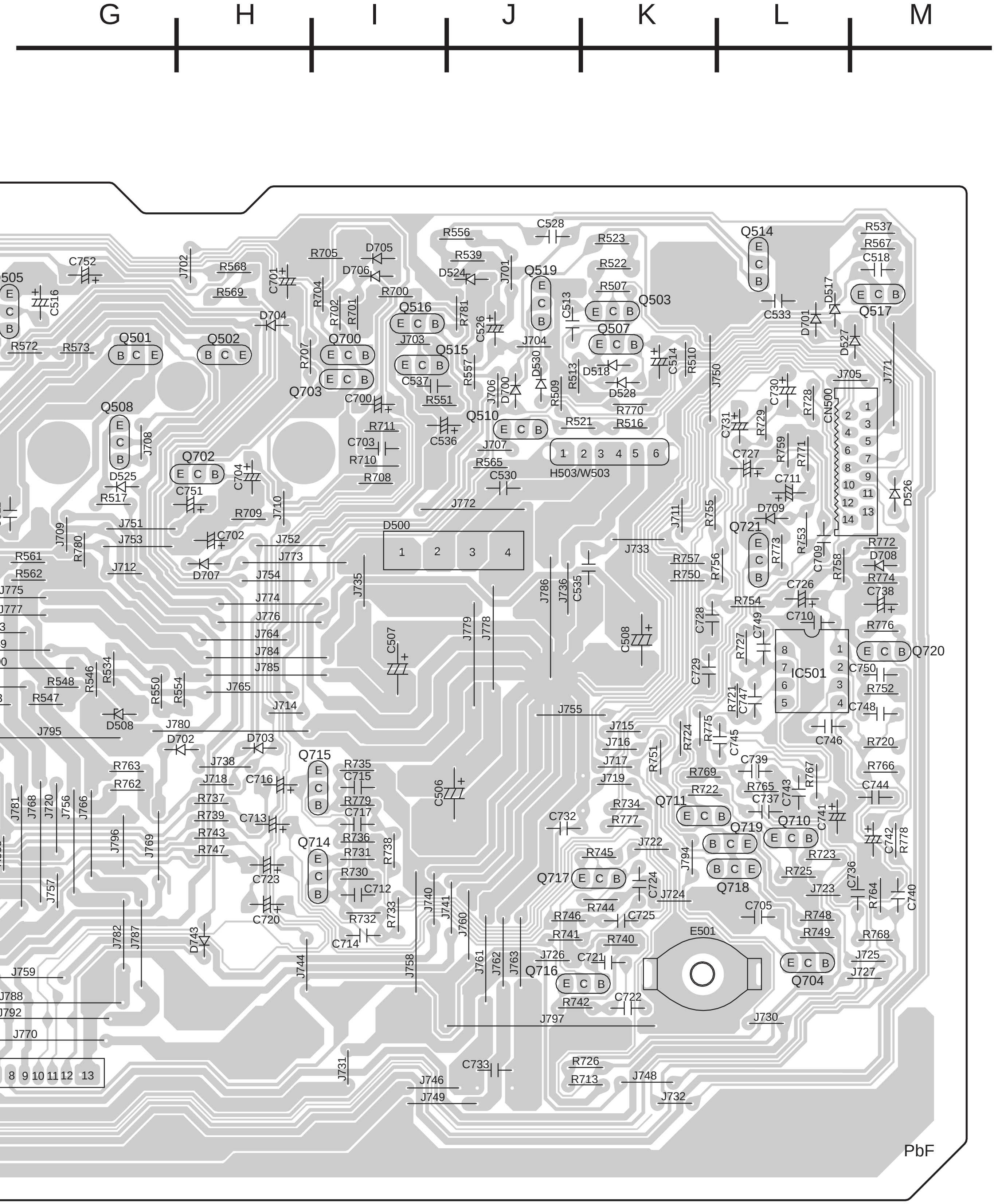

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J707
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R771
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J712
D707
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C710
R776
J764
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J778
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R550
R554
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D703
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C725
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R768
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C721
J744
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Q716
J725
Q704
J727
J759
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C722
J788
J797
J730
J792
J770
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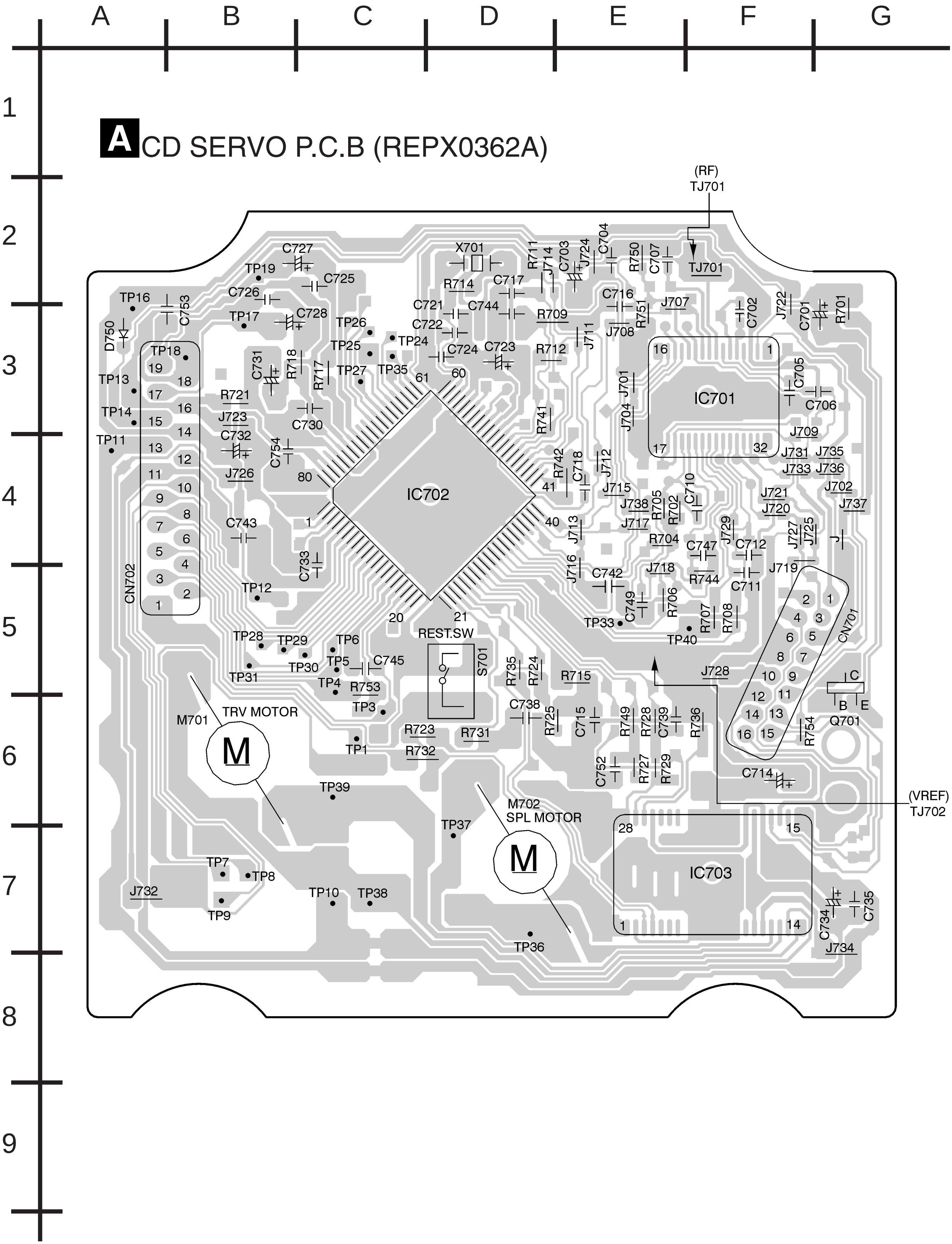
J749
J732
PbF

A CD SERVO P.C.B (REPX0362A)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(RF)
TJ701
C727
TP19
C725
C726
TP16
C753
TP17
C728
D750
TP18
19
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17
16
15
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13
12
11
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CN702
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TP11
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J726
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R717
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TP25
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TP24
TP35
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R708
TP40
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TP30
TP5
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TP31
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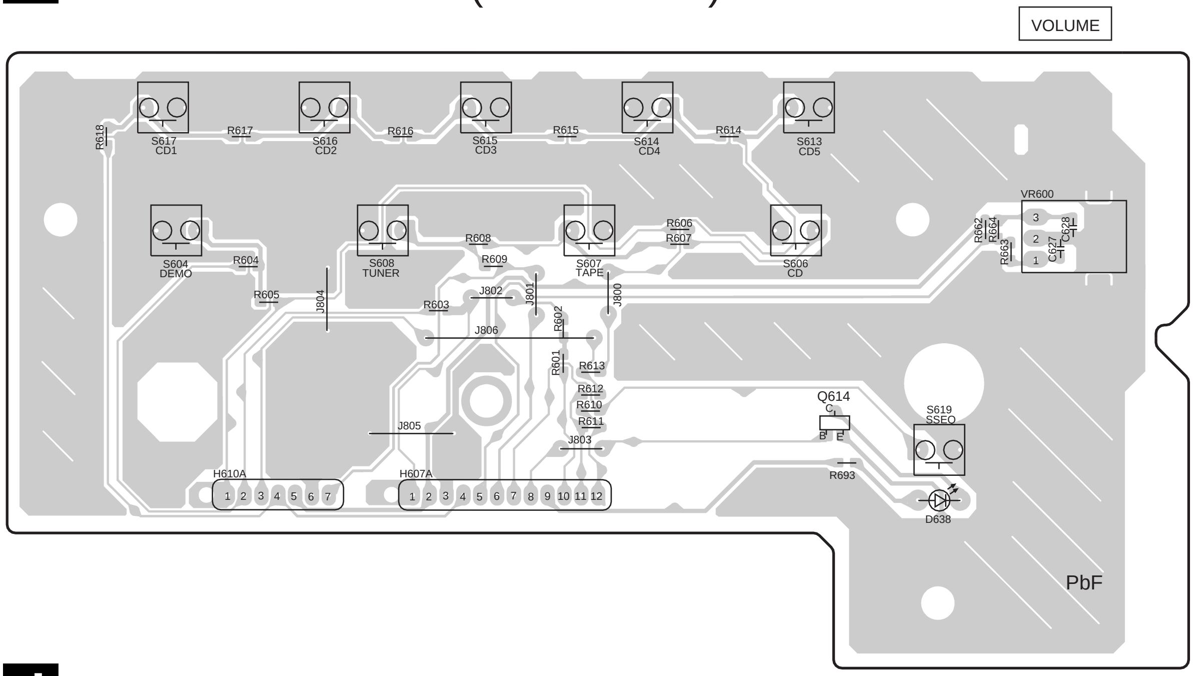
R753
TP3
REST.SW
S701
R735
R724
R715
J728
C
B
E
Q701
M701
TRV MOTOR
C738
R725
C715
R749
R728
C739
R736
R754
M
R723
R731
TP1
R732
C752
R727
R729
C714
TP39
(VREF)
TJ702
M702
SPL MOTOR
TP37
28
15
IC703
M
TP7
TP8
J732
TP10
TP38
TP9
1
14
TP36
C734
C735
J734

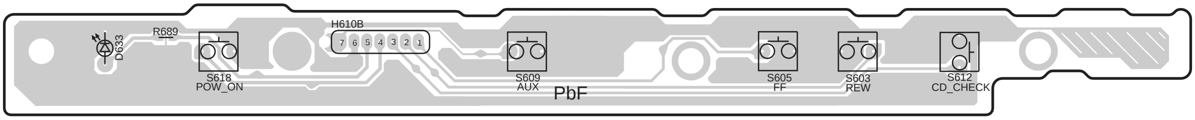
A B C D E F G

1 2 3 4 5 6 7 8 9

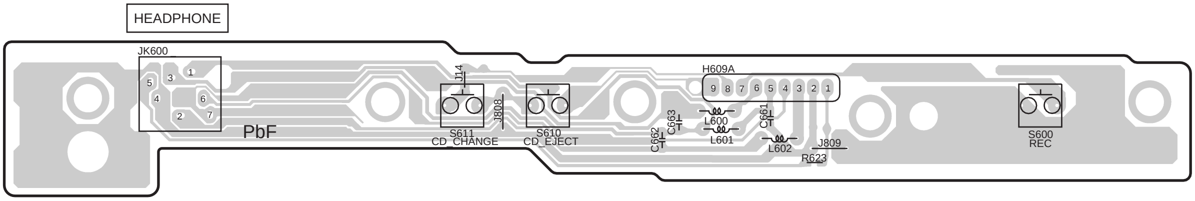
I TACT SWITCH P.C.B (REPX0349B)


VOLUME
S617
CD1
S616
CD2
S615
CD3
S614
CD4
S613
CD5
R618
R617
R616
R615
R614
S604
DEMO
S608
TUNER
S607
TAPE
S606
CD
R604
R605
R608
R609
R606
R607
R603
R602
R601
R613
R612
R610
R611
J804
J802
J801
J800
J806
J805
J803
VR600
R662
R664
R663
C627
C628
Q614
C
B
E
R693
S619
SSEQ
D638
H610A
1 2 3 4 5 6 7
H607A
1 2 3 4 5 6 7 8 9 10 11 12
PbF

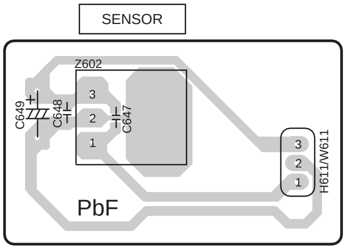
J AC LED P.C.B (REPX0349B)


D633
R689
H610B
7 6 5 4 3 2 1
S618
POW_ON
S609
AUX
PbF
S605
FF
S603
REW
S612
CD_CHECK

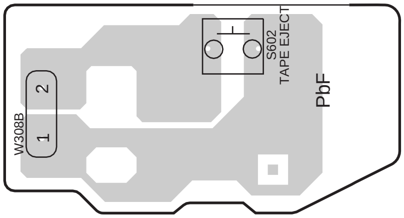
K HEADPHONE P.C.B (REPX0349B)


HEADPHONE
JK600
5 3 1 4 6 2 7
PbF
J14
S611
CD_CHANGE
J808
S610
CD_EJECT
C662
C663
L600
L601
H609A
9 8 7 6 5 4 3 2 1
C661
L602
J809
R623
S600
REC

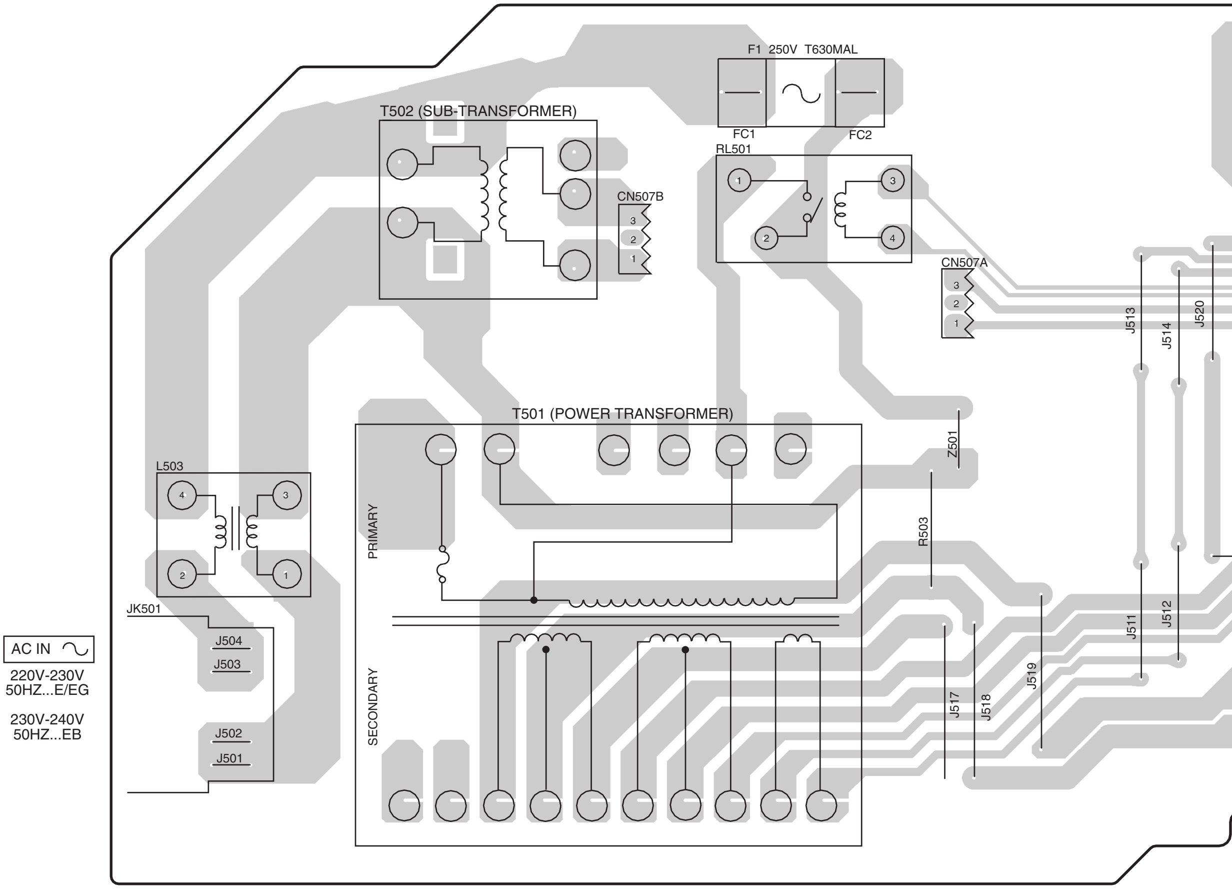
L SENSOR P.C.B (REPX0349B)

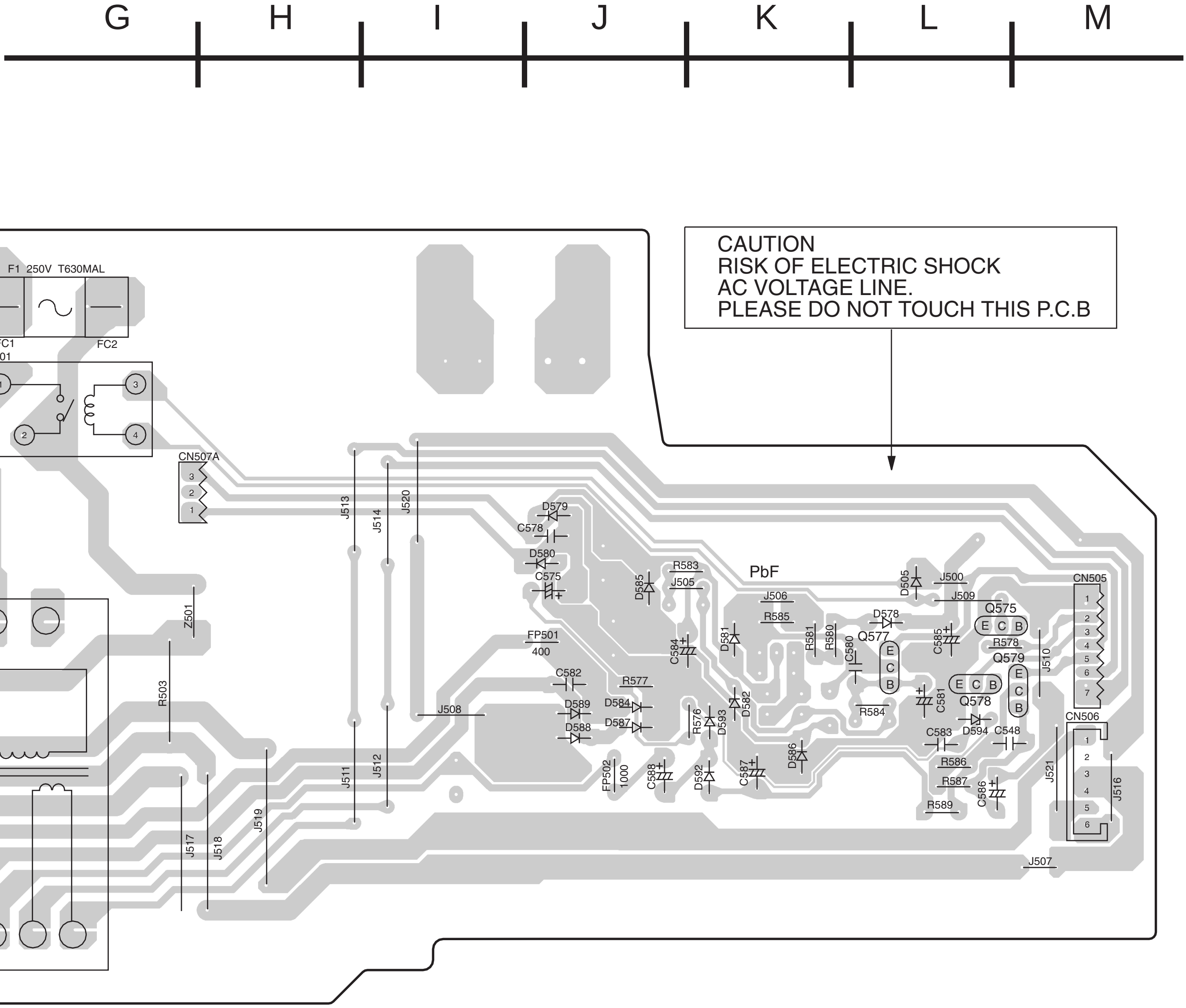

SENSOR
Z602
3
2
1
C649
C648
C647
3
2
1
H611/W611
PbF

F TAPE EJECT P.C.B (REPX0350A)


S602
TAPE EJECT
PbF
W308B
2
1

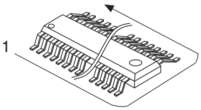
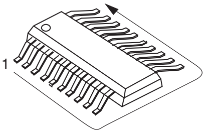
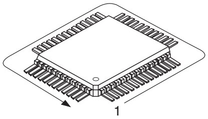
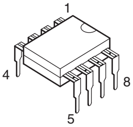
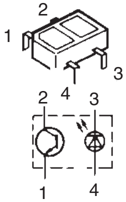
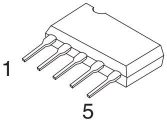
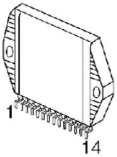
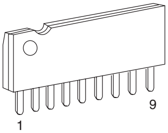
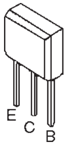
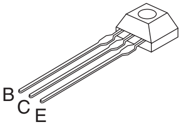
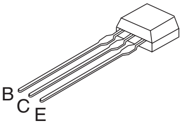
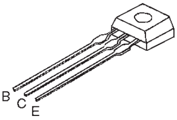
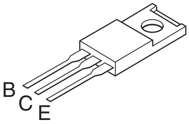
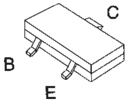
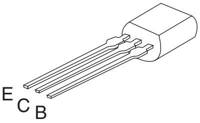
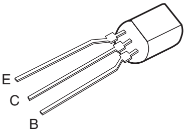
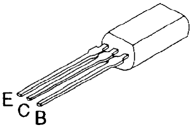
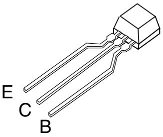
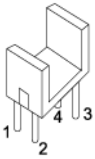
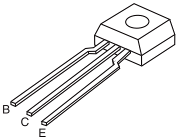
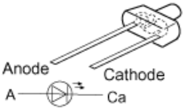
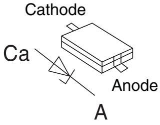
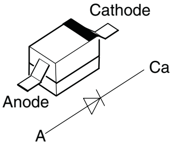
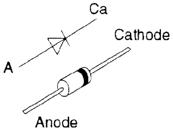
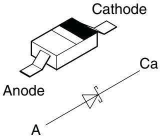
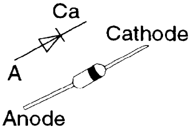
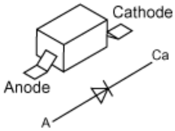
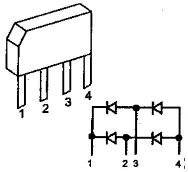
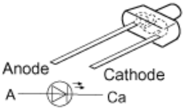
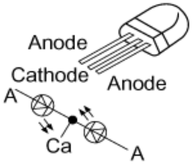
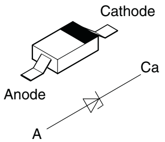
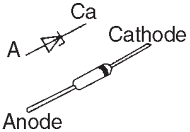
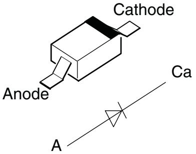
H AC TRANSFORMER P.C.B (REPX0348B...E/EG) (REPX0348D...EB)


A
B
C
D
E
F
G
1
2
3
4
5
6
7
8
9
F1 250V T630MAL
FC1
FC2
RL501
1
2
3
4
T502 (SUB-TRANSFORMER)
CN507B
3
2
1
CN507A
3
2
1
J513
J514
J520
T501 (POWER TRANSFORMER)
Z501
L503
4
3
2
1
PRIMARY
R503
JK501
J504
J503
AC IN
220V-230V
50HZ...E/EG
230V-240V
50HZ...EB
J502
J501
SECONDARY
J511
J512
J519
J517
J518

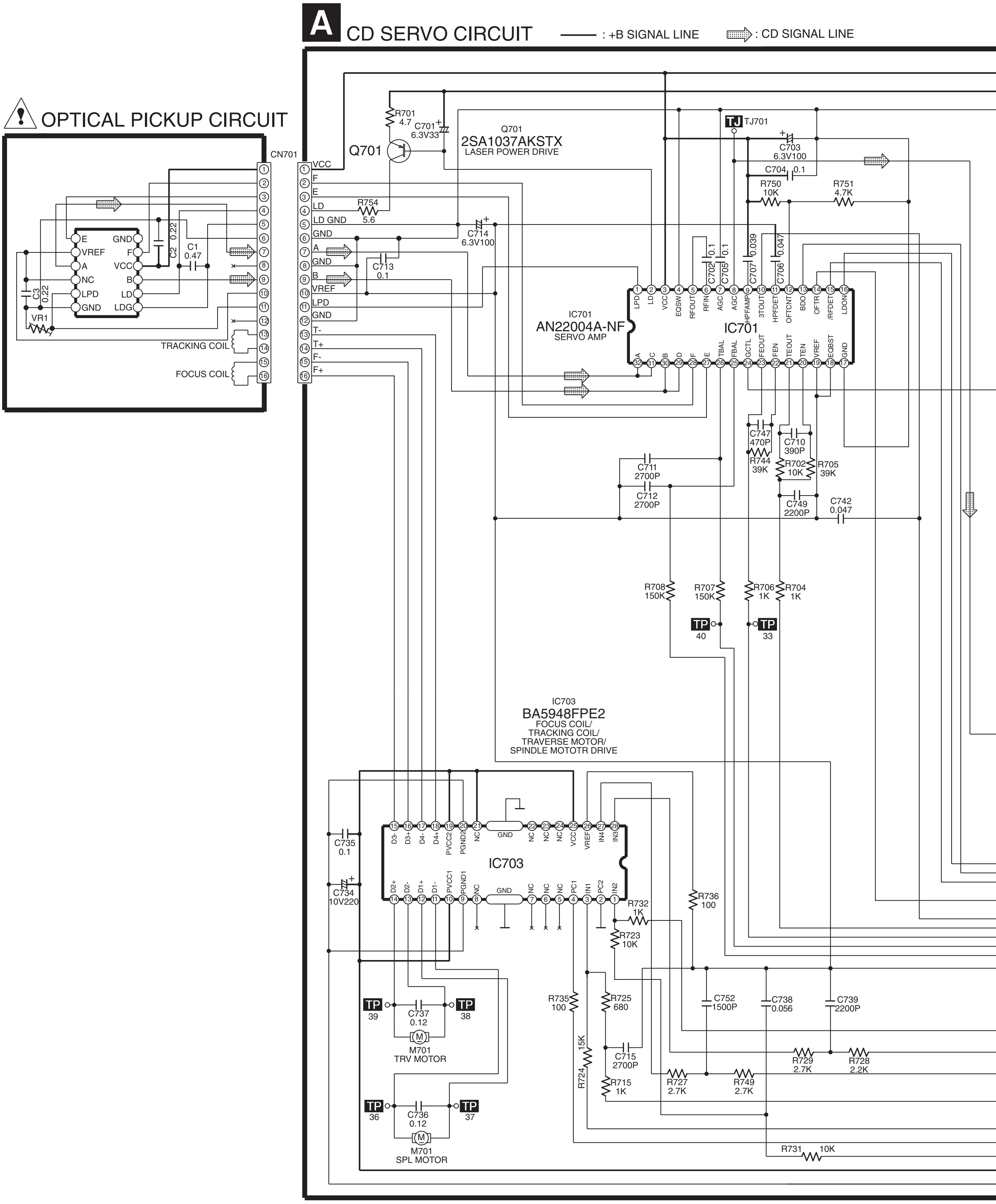


CAUTION
RISK OF ELECTRIC SHOCK
AC VOLTAGE LINE.
PLEASE DO NOT TOUCH THIS P.C.B

G
H
I
J
K
L
M
F1 250V T630MAL
FC1
FC2
RL501
1
2
3
4
CN507A
3
2
1
R)
Z501
R503
J513
J514
J520
J511
J512
J517
J518
J519
D579
C578
D580
C575
FP501
400
C582
D589
D588
D584
D587
R577
J508
FP502
1000
C588
D592
D585
R583
J505
C584
R576
D593
D582
D581
C587
D586
PbF
J506
R585
R581
R580
C580
Q577
E
C
B
D578
D505
J500
J509
Q575
E C B
C585
R578
Q579
E
C
B
J510
C581
Q578
E C B
R584
C583
D594
C548
R586
R587
R589
C586
CN505
1
2
3
4
5
6
7
CN506
1
2
3
4
5
6
J521
J516
J507

BA5948FPE2 (28P) AN7326K (26P)  	AN22004A-NF (32P) C1BB00000617 (30P) C1BB00000715 (16P) LA1833NMNTLM (24P) LC72131MDTRM (20P)  		MN662790RSC(80P) C2BBGF000424(100P)  	C0AABB000117  	CNB13030R2AU 
C1AA00000612  	RSN314H41A-P  	C0GAG0000007  	2SC2058SPTA 2SC2784FTA  	KRA102MTA KRC102MTA KRA110MTA  	B1AAGC000006 
KTC3199GRTA  	KTA1046 KTC2026  	B1ABGC000005 KTC3875GRTA KRC101STA KRC102STA KRC103STA KRC119STA 2SA1037AKSTX 2SC2412KT96R	DTA114EKA146 DTA143XKA146 DTC143XKA146 DTC114EKA146  	2SD0592ARA 2SD09650RA KTA12710YTA KTA1504GRTA KTC32030YTA KTA1267GRTA  	
2SB0621AHA  	2SC3940ARA  	2SC3311ARTA  	B3NAA0000068  	B1AACF000063  	B3AAA0000583  Anode Cathode A Ca
UDZSTE175R1B UDZSTE177R5B  Cathode Ca Anode A	UDZSTE174R7B  Cathode Anode Ca A	RL1N4003N02  Ca Cathode A Anode	B0ACCK000005  Cathode Anode Ca A	B0AACK000004 MA2C16500E  Ca Cathode A Anode	RB501V-40  Cathode Anode Ca A
KBL402G  	LNJ801TPSJA  Anode Cathode A Ca	B3CNE0000001  Anode Cathode Anode A Ca A	MAZ80560ML  Cathode Anode Ca A	B0BA5R600016 B0BA9R600002 B0BA6R600008 MAZ4150NLF MAZ4150NMF MTZJ24CTA  Ca A Cathode Anode	
1SS380TE-17  Cathode Anode Ca A					

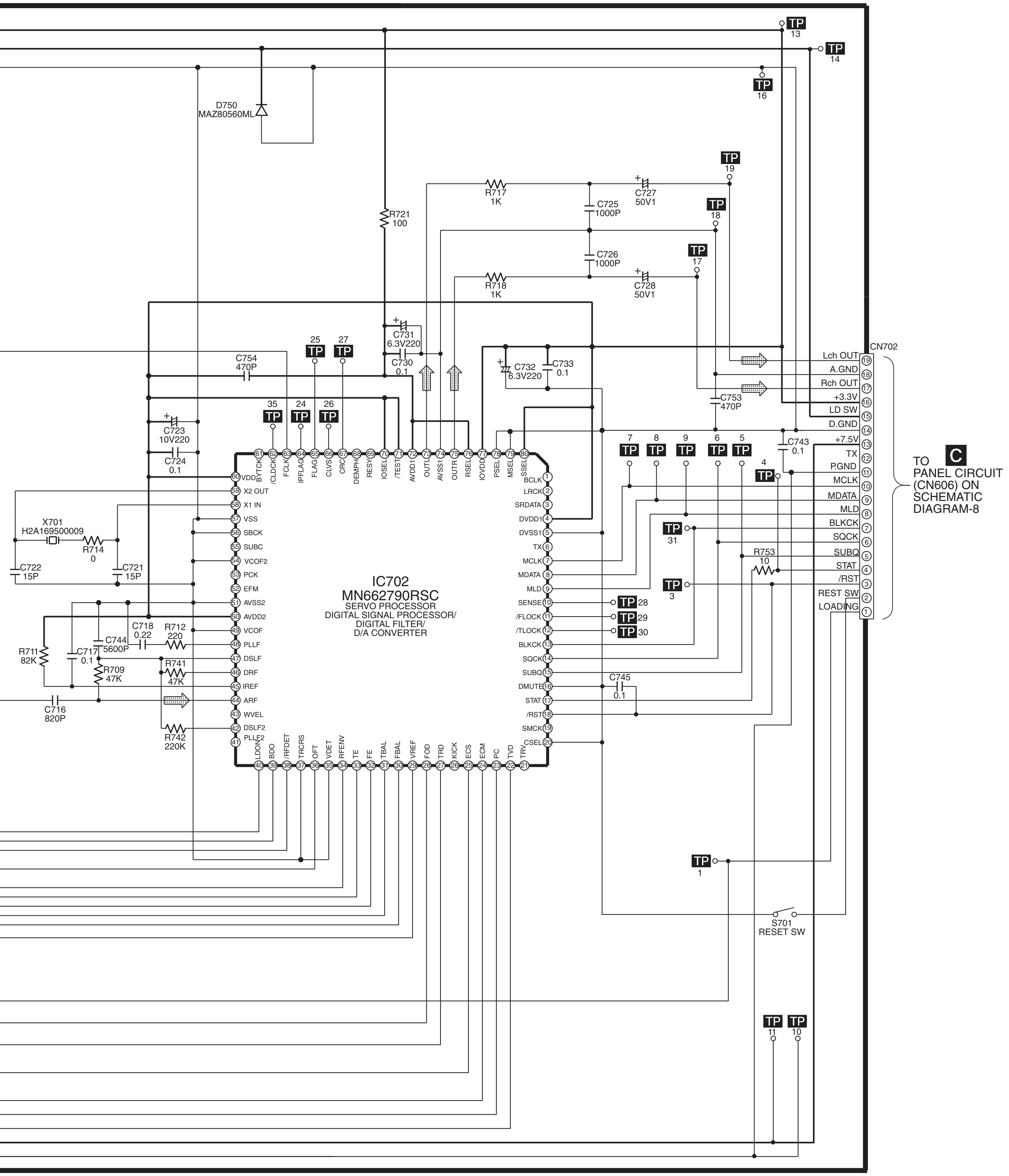
SCHEMATIC DIAGRAM -1


A
CD SERVO CIRCUIT
: +B SIGNAL LINE
: CD SIGNAL LINE
OPTICAL PICKUP CIRCUIT
CN701
E
VREF
A
NC
LPD
GND
GND
F
VCC
B
LD
LDG
C2 0.22
C1 0.47
C3 0.22
VR1
TRACKING COIL
FOCUS COIL
VCC
F
E
LD
LD GND
GND
A
GND
B
VREF
LPD
GND
T-
T+
F-
F+
R701 4.7
C701 6.3V33
Q701
Q701
2SA1037AKSTX
LASER POWER DRIVE
R754 5.6
C714 6.3V100
C713 0.1
TJ
TJ701
C703 6.3V100
C704 0.1
R750 10K
R751 4.7K
C702 0.1
C705 0.1
C707 0.039
C706 0.047
IC701
AN22004A-NF
SERVO AMP
IC701
LPD
LD
VCC
EQSW
RFOUT
RFIN
AGC
AGC
HPFAMP
3TOUT
HPFDET
OFTCNT
BDO
OFTR
/RFDET
LDON
A
C
B
D
F
E
TBAL
FBAL
GCTL
FEOUT
FEN
TEOUT
TEN
VREF
EOBST
GND
C747 470P
R744 39K
C710 390P
R702 10K
R705 39K
C711 2700P
C712 2700P
C749 2200P
C742 0.047
R708 150K
R707 150K
R706 1K
R704 1K
TP 40
TP 33
IC703
BA5948FPE2
FOCUS COIL/
TRACKING COIL/
TRAVERSE MOTOR/
SPINDLE MOTOTR DRIVE
IC703
D3-
D3+
D4-
D4+
PVCC2
PGND2
NC
GND
NC
NC
NC
VCC
VREF
IN4
IN3
D2+
D2-
D1+
D1-
PVCC1
PGND1
NC
GND
NC
NC
NC
PC1
IN1
PC2
IN2
C735 0.1
C734 10V220
R736 100
R732 1K
R723 10K
TP 39
TP 38
C737 0.12
M701
TRV MOTOR
TP 36
TP 37
C736 0.12
M701
SPL MOTOR
R735 100
R725 680
R724 15K
C715 2700P
R715 1K
C752 1500P
C738 0.056
C739 2200P
R727 2.7K
R749 2.7K
R729 2.7K
R728 2.2K
R731 10K

SCHEMATIC DIAGRAM - 2

A CD SERVO CIRCUIT

——— : +B SIGNAL LINE ⇨ : CD SIGNAL LINE



TP 13
TP 14
TP 16
D750
MAZ80560ML
TP 19
R717
1K
C725
1000P
C727
50V1
TP 18
R721
100
C726
1000P
TP 17
R718
1K
C728
50V1
C731
6.3V220
C730
0.1
25
TP
27
TP
C754
470P
C732
6.3V220
C733
0.1
C753
470P
CN702
Lch OUT ⑲
A.GND ⑱
Rch OUT ⑰
+3.3V ⑯
LD SW ⑮
D.GND ⑭
+7.5V ⑬
TX ⑫
P.GND ⑪
MCLK ⑩
MDATA ⑨
MLD ⑧
BLKCK ⑦
SQCK ⑥
SUBQ ⑤
STAT ④
/RST ③
REST SW ②
LOADING ①
TO C PANEL CIRCUIT (CN606) ON SCHEMATIC DIAGRAM-8
35 TP
24 TP
26 TP
C723
10V220
C724
0.1
7 TP
8 TP
9 TP
6 TP
5 TP
C743
0.1
4 TP
X701
H2A169500009
R714
0
C722
15P
C721
15P
IC702
MN662790RSC
SERVO PROCESSOR
DIGITAL SIGNAL PROCESSOR/
DIGITAL FILTER/
D/A CONVERTER
61 BYTCK
62 /CLDCK
63 FCLK
64 IPFLAG
65 FLAG
66 CLVS
67 CRC
68 DEMPH
69 RESY
70 IOSEL
71 /TEST
72 AVDD1
73 OUTL
74 AVSS1
75 OUTR
76 RSEL
77 IOVDD
78 PSEL
79 MSEL
80 SSEL
60 VDD
59 X2 OUT
58 X1 IN
57 VSS
56 SBCK
55 SUBC
54 VCOF2
53 PCK
52 EFM
51 AVSS2
50 AVDD2
49 VCOF
48 PLLF
47 DSLF
46 DRF
45 IREF
44 ARF
43 WVEL
42 DSLF2
41 PLLF2
BCLK 1
LRCK 2
SRDATA 3
DVDD1 4
DVSS1 5
TX 6
MCLK 7
MDATA 8
MLD 9
SENSE 10
/FLOCK 11
/TLOCK 12
BLKCK 13
SQCK 14
SUBQ 15
DMUTE 16
STAT 17
/RST 18
SMCK 19
CSEL 20
40 LDON
39 BDO
38 /RFDET
37 TRCRS
36 OFT
35 VDET
34 RFENV
33 TE
32 FE
31 TBAL
30 FBAL
29 VREF
28 FOD
27 TRD
26 KICK
25 ECS
24 ECM
23 PC
22 TVD
21 TRV
TP 31
R753
10
TP 3
TP 28
TP 29
TP 30
C718
0.22
R712
220
C744
5600P
R711
82K
C717
0.1
R709
47K
R741
47K
C716
820P
R742
220K
C745
0.1
TP 1
S701
RESET SW
TP 11
TP 10

SCHEMATIC DIAGRAM - 3

B MAIN (TUNER) CIRCUIT

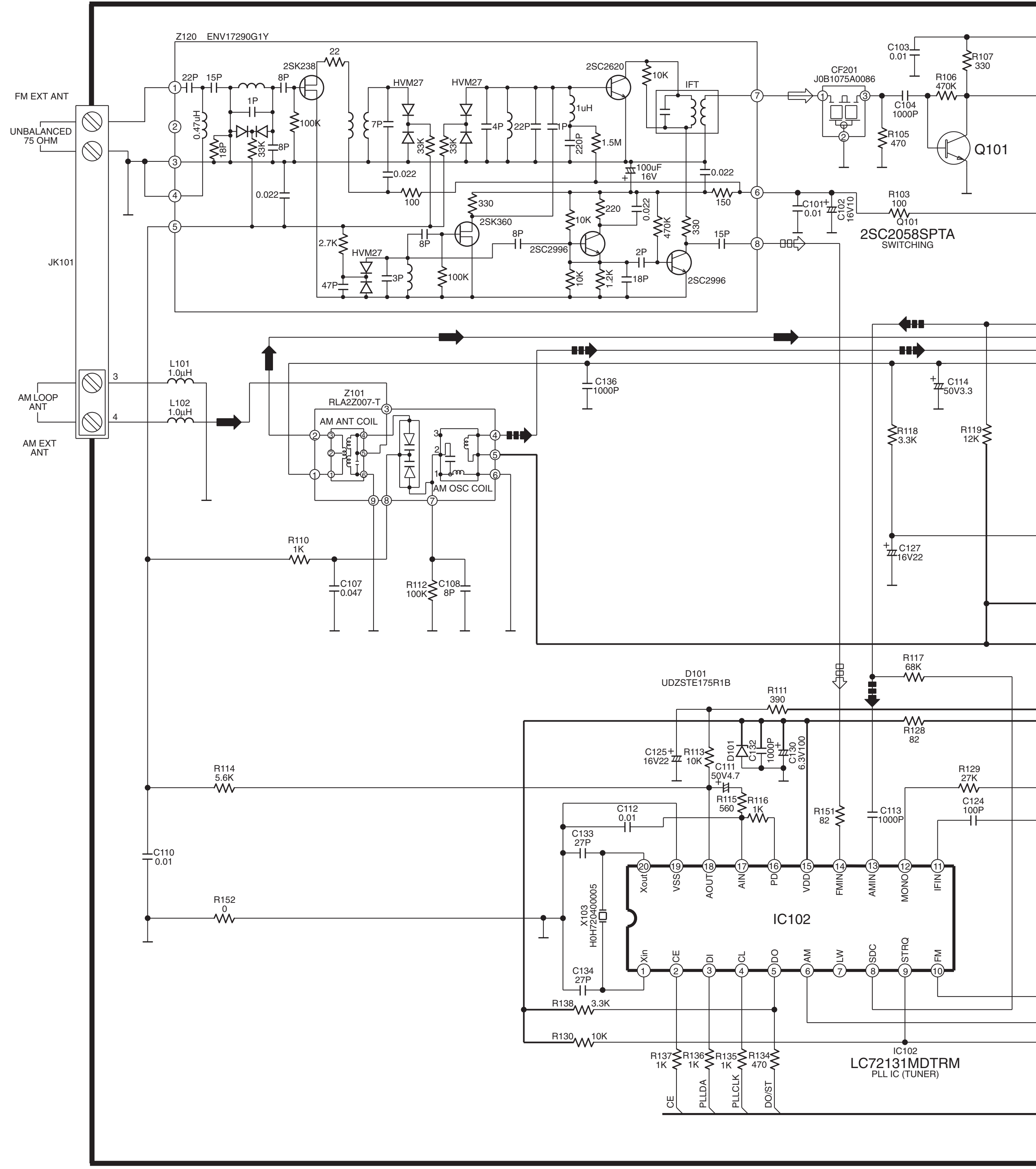
— : +B SIGNAL LINE

➡ : AM SIGNAL LINE

▯▯▯⇨ : FM OSC SIGNAL LINE

⇨ : FM SIGNAL LINE

■■■➡ : AM OSC SIGNAL LINE



Z120 ENV17290G1Y
FM EXT ANT
UNBALANCED 75 OHM
22P
15P
8P
1P
0.47uH
18P
33K
8P
100K
2SK238
22
HVM27
7P
33K
0.022
33K
HVM27
4P
22P
1P
1uH
220P
1.5M
2SC2620
10K
IFT
100uF 16V
0.022
100
0.022
150
330
2SK360
10K
220
0.022
470K
330
2.7K
8P
8P
2SC2996
HVM27
3P
100K
47P
10K
1.2K
18P
2P
15P
2SC2996
JK101
CF201
J0B1075A0086
C103 0.01
R107 330
R106 470K
C104 1000P
R105 470
Q101
C101 0.01
C102 16V10
R103 100
Q101
2SC2058SPTA
SWITCHING
L101 1.0µH
L102 1.0µH
AM LOOP ANT
AM EXT ANT
Z101
RLA2Z007-T
AM ANT COIL
AM OSC COIL
C136 1000P
C114 50V3.3
R118 3.3K
R119 12K
C127 16V22
R110 1K
C107 0.047
R112 100K
C108 8P
R117 68K
D101
UDZSTE175R1B
R111 390
R128 82
C125 16V22
R113 10K
D101
C132
1000P
C130 6.3V100
C111 50V4.7
R115 560
R116 1K
R114 5.6K
C112 0.01
C133 27P
R151 82
C113 1000P
R129 27K
C124 100P
C110 0.01
R152 0
X103
H0H720400005
C134 27P
Xout
VSS
AOUT
AIN
PD
VDD
FMIN
AMIN
MONO
IFIN
IC102
Xin
CE
DI
CL
DO
AM
LW
SDC
STRQ
FM
R138 3.3K
R130 10K
R137 1K
R136 1K
R135 1K
R134 470
IC102
LC72131MDTRM
PLL IC (TUNER)
CE
PLLDA
PLLCLK
DO/ST

SCHEMATIC DIAGRAM - 4

B MAIN (TUNER) CIRCUIT

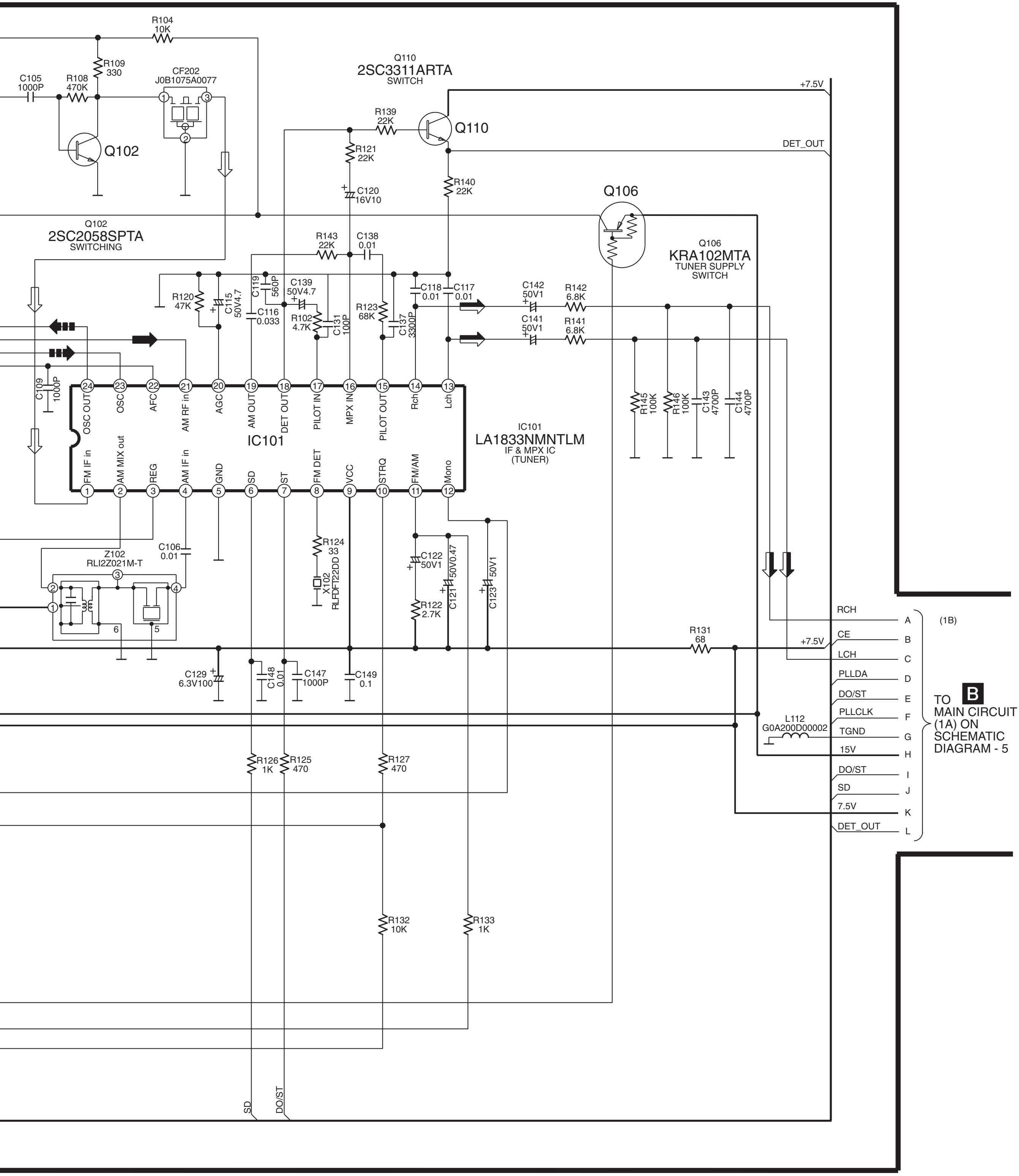
—— : +B SIGNAL LINE

➡ : AM SIGNAL LINE

⇨ : FM SIGNAL LINE

▮▮➡ : AM OSC SIGNAL LINE

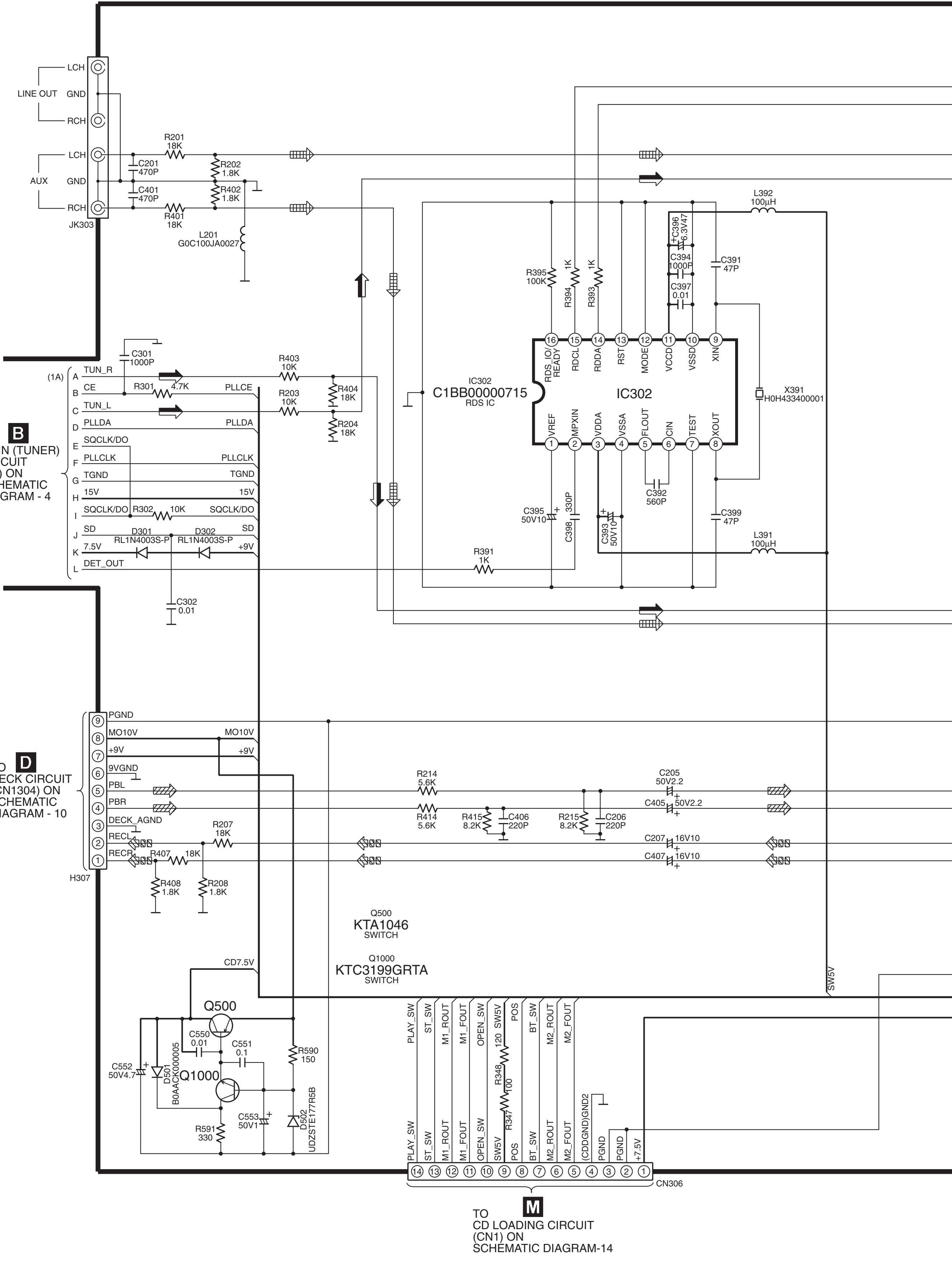
➡ : FM/AM SIGNAL LINE


R104
10K
R109
330
C105
1000P
R108
470K
CF202
J0B1075A0077
Q102
Q102
2SC2058SPTA
SWITCHING
Q110
2SC3311ARTA
SWITCH
R139
22K
Q110
R121
22K
C120
16V10
R140
22K
+7.5V
DET_OUT
Q106
Q106
KRA102MTA
TUNER SUPPLY
SWITCH
R143
22K
C138
0.01
R120
47K
C115
50V4.7
C119
560P
C116
0.033
C139
50V4.7
R102
4.7K
C131
100P
R123
68K
C137
3300P
C118
0.01
C117
0.01
C142
50V1
R142
6.8K
C141
50V1
R141
6.8K
C109
1000P
R145
100K
R146
100K
C143
4700P
C144
4700P
OSC OUT
OSC
AFC
AM RF in
AGC
AM OUT
DET OUT
PILOT IN
MPX IN
PILOT OUT
Rch
Lch
IC101
IC101
LA1833NMNTLM
IF & MPX IC
(TUNER)
FM IF in
AM MIX out
REG
AM IF in
GND
SD
ST
FM DET
VCC
STRQ
FM/AM
Mono
C106
0.01
Z102
RLI2Z021M-T
R124
33
X102
RLFDFT22DD
C122
50V1
C121
50V0.47
C123
50V1
R122
2.7K
C129
6.3V100
C148
0.01
C147
1000P
C149
0.1
R131
68
+7.5V
L112
G0A200D00002
R126
1K
R125
470
R127
470
R132
10K
R133
1K
SD
DO/ST
RCH
CE
LCH
PLLDA
DO/ST
PLLCLK
TGND
15V
DO/ST
SD
7.5V
DET_OUT
A
B
C
D
E
F
G
H
I
J
K
L
(1B)
TO B
MAIN CIRCUIT
(1A) ON
SCHEMATIC
DIAGRAM - 5

SCHEMATIC DIAGRAM - 5

B MAIN CIRCUIT

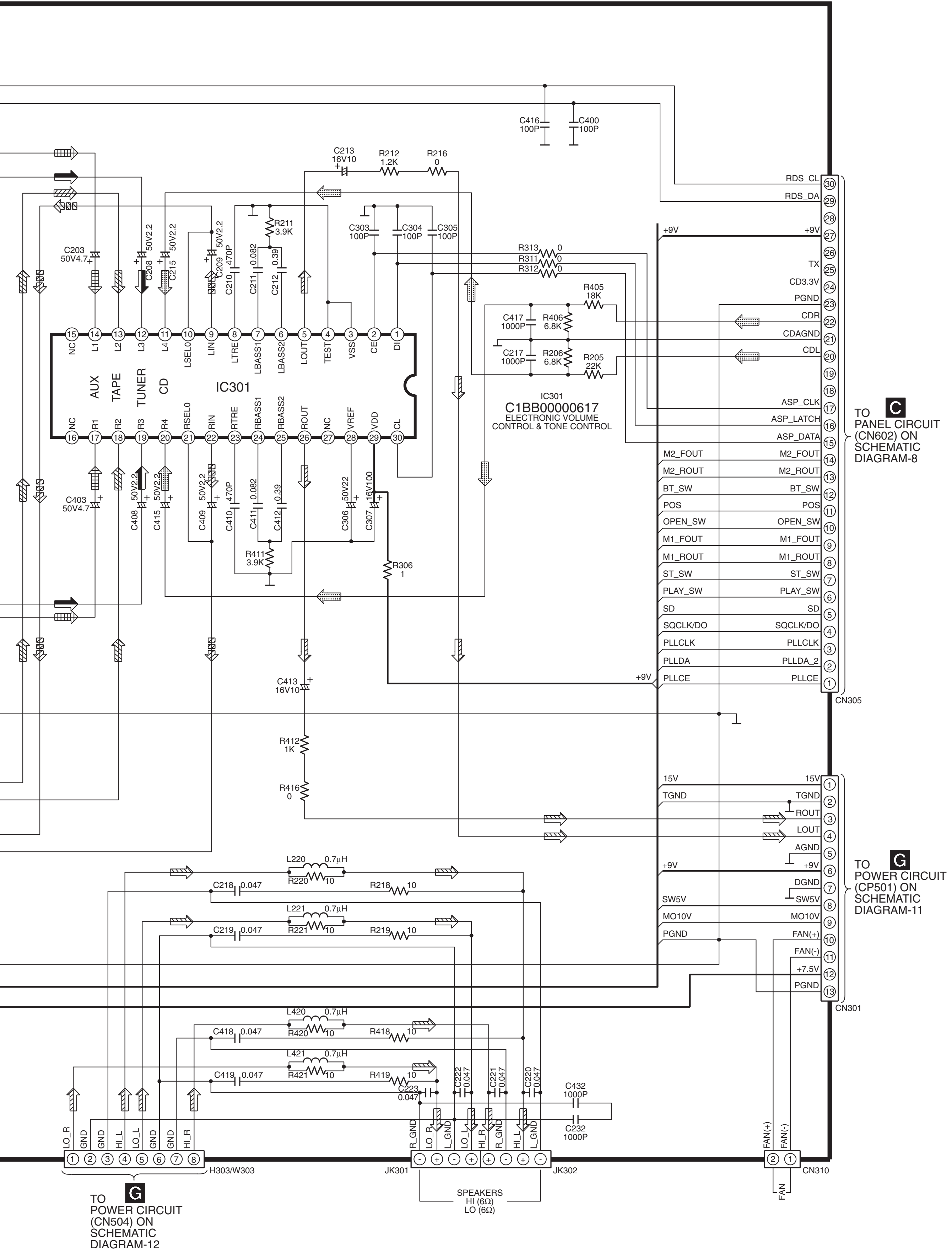
—— : +B SIGNAL LINE
▥ : AUX SIGNAL LINE
➡ : AM/FM SIGNAL LINE
▨ : PLAYBACK SIGNAL LINE
▧ : RECORD SIGNAL LINE


LINE OUT
LCH
GND
RCH
AUX
LCH
GND
RCH
JK303
R201 18K
C201 470P
R202 1.8K
C401 470P
R402 1.8K
R401 18K
L201 G0C100JA0027
C301 1000P
(1A)
A TUN_R
B CE
C TUN_L
D PLLDA
E SQCLK/DO
F PLLCLK
G TGND
H 15V
I SQCLK/DO
J SD
K 7.5V
L DET_OUT
R301 4.7K
PLLCE
PLLDA
PLLCLK
TGND
15V
R302 10K
SQCLK/DO
SD
D301 RL1N4003S-P
D302 RL1N4003S-P
+9V
C302 0.01
TO B MAIN (TUNER) CIRCUIT (1B) ON SCHEMATIC DIAGRAM - 4
R403 10K
R203 10K
R404 18K
R204 18K
R391 1K
IC302 C1BB00000715 RDS IC
IC302
16 RDS_IO/READY
15 RDCL
14 RDDA
13 RST
12 MODE
11 VCCD
10 VSSD
9 XIN
1 VREF
2 MPXIN
3 VDDA
4 VSSA
5 FLOUT
6 CIN
7 TEST
8 XOUT
R395 100K
R394 1K
R393 1K
C396 6.3V47
C394 1000P
C397 0.01
C391 47P
L392 100μH
X391 H0H433400001
C395 50V10
C398 330P
C393 50V10
C392 560P
C399 47P
L391 100μH
PGND
MO10V
+9V
9VGND
PBL
PBR
DECK_AGND
RECL
RECR
H307
TO D DECK CIRCUIT (CN1304) ON SCHEMATIC DIAGRAM - 10
R207 18K
R407 18K
R408 1.8K
R208 1.8K
R214 5.6K
R414 5.6K
R415 8.2K
C406 220P
R215 8.2K
C206 220P
C205 50V2.2
C405 50V2.2
C207 16V10
C407 16V10
Q500 KTA1046 SWITCH
Q1000 KTC3199GRTA SWITCH
CD7.5V
Q500
Q1000
C550 0.01
C551 0.1
C552 50V4.7
D501 B0AACK000005
R590 150
C553 50V1
D502 UDZSTE177R5B
R591 330
SW5V
PLAY_SW
ST_SW
M1_ROUT
M1_FOUT
OPEN_SW
120 SW5V
POS
BT_SW
M2_ROUT
M2_FOUT
R348 100
R347
(CDDGND)GND2
PGND
PGND
+7.5V
SW5V
CN306
TO M CD LOADING CIRCUIT (CN1) ON SCHEMATIC DIAGRAM-14

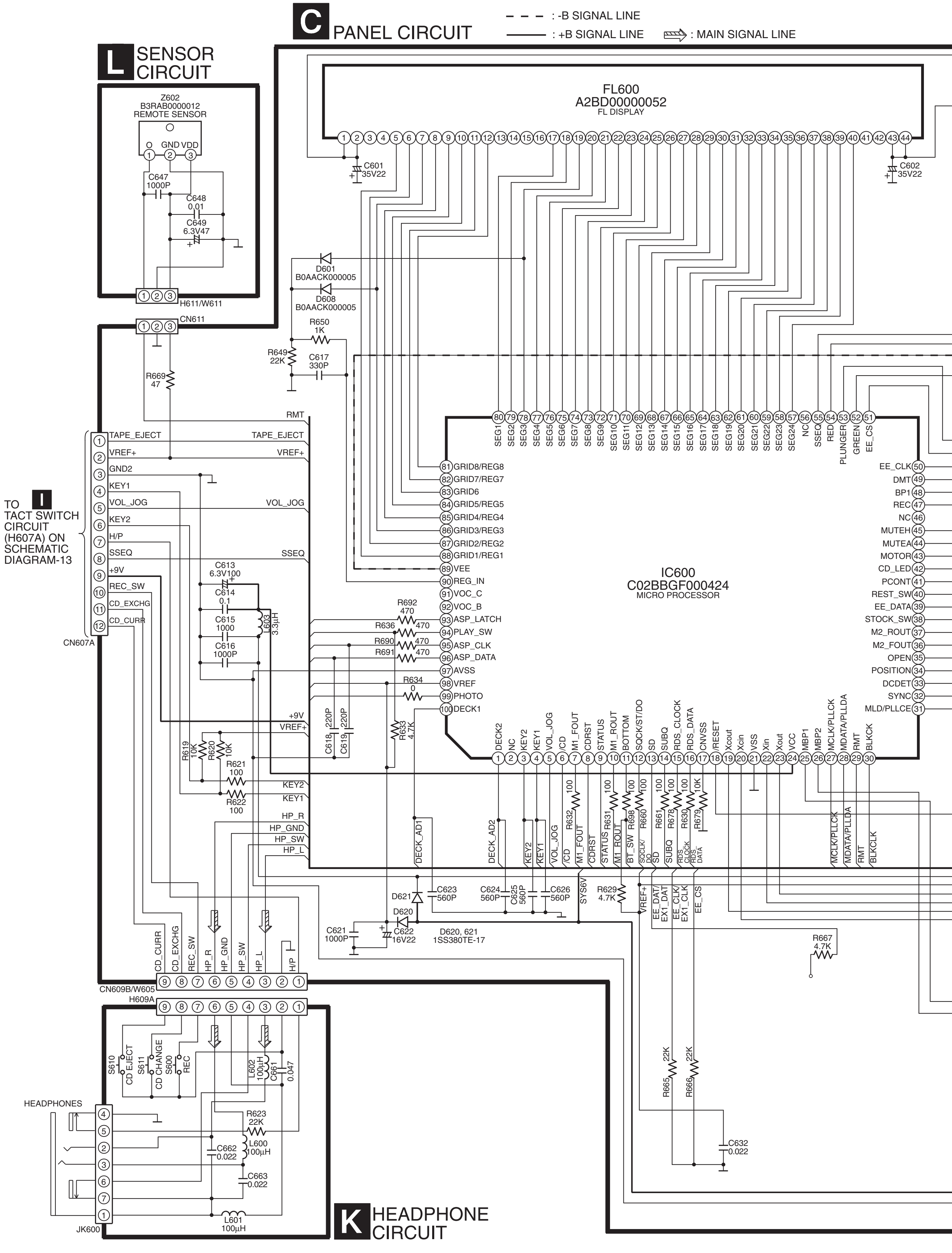
SCHEMATIC DIAGRAM - 6

B MAIN CIRCUIT

—— : +B SIGNAL LINE
: AUX SIGNAL LINE
: AM/FM SIGNAL LINE
: PLAYBACK SIGNAL LINE
: RECORD SIGNAL LINE
: MAIN SIGNAL LINE
: CD SIGNAL LINE


C416 100P
C400 100P
C213 16V10
R212 1.2K
R216 0
R211 3.9K
C303 100P
C304 100P
C305 100P
C203 50V4.7
C208 50V2.2
C215 50V2.2
C209 50V2.2
C210 470P
C211 0.082
C212 0.39
R313 0
R311 0
R312 0
R405 18K
C417 1000P
R406 6.8K
C217 1000P
R206 6.8K
R205 22K
IC301
NC L1 L2 L3 L4 LSEL0 LIN LTRE LBASS1 LBASS2 LOUT TEST VSS CE DI
NC R1 R2 R3 R4 RSEL0 RIN RTRE RBASS1 RBASS2 ROUT NC VREF VDD CL
AUX TAPE TUNER CD
IC301
C1BB00000617
ELECTRONIC VOLUME
CONTROL & TONE CONTROL
C403 50V4.7
C408 50V2.2
C415 50V2.2
C409 50V2.2
C410 470P
C411 0.082
C412 0.39
C306 50V22
C307 16V100
R411 3.9K
R306 1
C413 16V10
R412 1K
R416 0
RDS_CL RDS_DA +9V TX CD3.3V PGND CDR CDAGND CDL ASP_CLK ASP_LATCH ASP_DATA M2_FOUT M2_ROUT BT_SW POS OPEN_SW M1_FOUT M1_ROUT ST_SW PLAY_SW SD SQCLK/DO PLLCLK PLLDA PLLDA_2 PLLCE
CN305
TO C PANEL CIRCUIT (CN602) ON SCHEMATIC DIAGRAM-8
15V TGND ROUT LOUT AGND +9V DGND SW5V MO10V PGND FAN(+) FAN(-) +7.5V PGND
CN301
TO G POWER CIRCUIT (CP501) ON SCHEMATIC DIAGRAM-11
L220 0.7μH
R220 10
C218 0.047
R218 10
L221 0.7μH
R221 10
C219 0.047
R219 10
L420 0.7μH
R420 10
C418 0.047
R418 10
L421 0.7μH
R421 10
C419 0.047
R419 10
C223 0.047
C222 0.047
C221 0.047
C220 0.047
C432 1000P
C232 1000P
LO_R GND GND HI_L LO_L GND GND HI_R
H303/W303
R_GND LO_R L_GND LO_L HI_R R_GND HI_L L_GND
JK301
JK302
SPEAKERS HI (6Ω) LO (6Ω)
FAN(+) FAN(-)
CN310
FAN
TO G POWER CIRCUIT (CN504) ON SCHEMATIC DIAGRAM-12

SCHEMATIC DIAGRAM - 7



C PANEL CIRCUIT
- - - : -B SIGNAL LINE
——— : +B SIGNAL LINE
: MAIN SIGNAL LINE
L SENSOR CIRCUIT
Z602
B3RAB0000012
REMOTE SENSOR
O GND VDD
C647 1000P
C648 0.01
C649 6.3V47
H611/W611
CN611
R669 47
FL600
A2BD00000052
FL DISPLAY
C601 35V22
C602 35V22
D601 B0AACK000005
D608 B0AACK000005
R650 1K
R649 22K
C617 330P
RMT
TAPE_EJECT
VREF+
GND2
KEY1
VOL_JOG
KEY2
H/P
SSEQ
+9V
REC_SW
CD_EXCHG
CD_CURR
CN607A
TO I TACT SWITCH CIRCUIT (H607A) ON SCHEMATIC DIAGRAM-13
C613 6.3V100
C614 0.1
C615 1000
C616 1000P
L603 3.3µH
R692 470
R636 470
R690 470
R691 470
R634 0
R633 4.7K
C618 220P
C619 220P
R619 10K
R620 10K
R621 100
R622 100
HP_R
HP_GND
HP_SW
HP_L
IC600
C02BBGF000424
MICRO PROCESSOR
SEG1 SEG2 SEG3 SEG4 SEG5 SEG6 SEG7 SEG8 SEG9 SEG10 SEG11 SEG12 SEG13 SEG14 SEG15 SEG16 SEG17 SEG18 SEG19 SEG20 SEG21 SEG22 SEG23 SEG24 NC SSEQ RED PLUNGER GREEN EE_CS
81 GRID8/REG8
82 GRID7/REG7
83 GRID6
84 GRID5/REG5
85 GRID4/REG4
86 GRID3/REG3
87 GRID2/REG2
88 GRID1/REG1
89 VEE
90 REG_IN
91 VOC_C
92 VOC_B
93 ASP_LATCH
94 PLAY_SW
95 ASP_CLK
96 ASP_DATA
97 AVSS
98 VREF
99 PHOTO
100 DECK1
EE_CLK 50
DMT 49
BP1 48
REC 47
NC 46
MUTEH 45
MUTEA 44
MOTOR 43
CD_LED 42
PCONT 41
REST_SW 40
EE_DATA 39
STOCK_SW 38
M2_ROUT 37
M2_FOUT 36
OPEN 35
POSITION 34
DCDET 33
SYNC 32
MLD/PLLCE 31
DECK2 NC KEY2 KEY1 VOL_JOG /CD M1_FOUT CDRST STATUS M1_ROUT BOTTOM SQCK/ST/DO SD SUBQ RDS_CLOCK RDS_DATA CNVSS /RESET Xcout Xcin VSS Xin Xout VCC MBP1 MBP2 MCLK/PLLCK MDATA/PLLDA RMT BLKCK
R632 100
R631 100
R698 100
R660 100
R661 100
R678 100
R630 100
R679 10K
DECK_AD1
DECK_AD2
SYS6V
BT_SW
SQCLK/DO
RDS CLOCK
RDS DATA
C623 560P
C624 560P
C625 560P
C626 560P
D621
D620
R629 4.7K
VREF+
EE_DAT/EX1_DAT
EE_CLK/EX1_CLK
EE_CS
C621 1000P
C622 16V22
D620, 621 1SS380TE-17
R667 4.7K
CN609B/W605
H609A
CD_CURR CD_EXCHG REC_SW HP_R HP_GND HP_SW HP_L H/P
S610 CD EJECT
S611 CD CHANGE
S600 REC
L602 100µH
C661 0.047
HEADPHONES
JK600
R623 22K
L600 100µH
C662 0.022
C663 0.022
L601 100µH
K HEADPHONE CIRCUIT
R665 22K
R666 22K
C632 0.022

SCHEMATIC DIAGRAM - 8

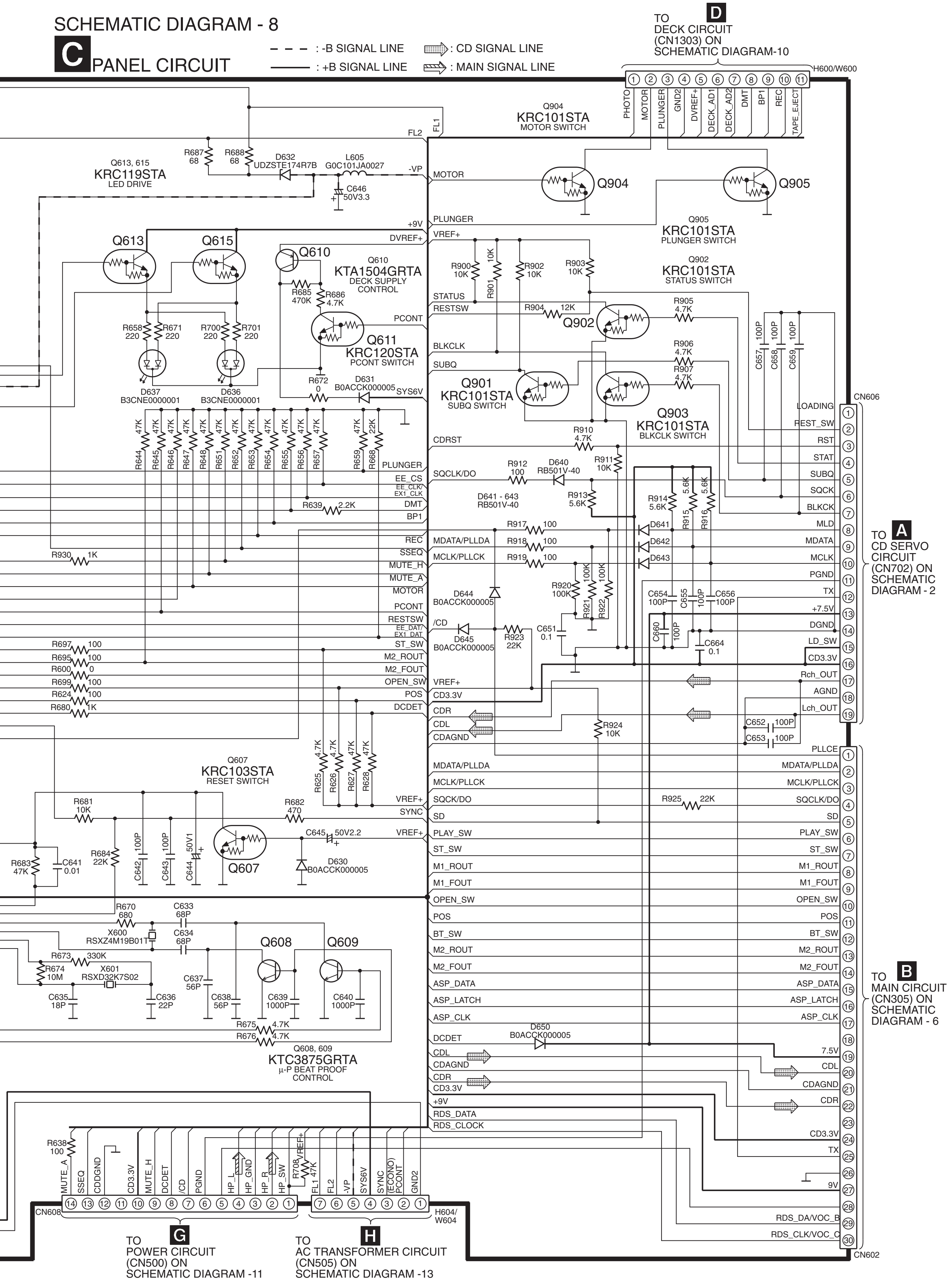
C PANEL CIRCUIT

- - - : -B SIGNAL LINE

—— : +B SIGNAL LINE

▨ : CD SIGNAL LINE

▨ : MAIN SIGNAL LINE


TO D DECK CIRCUIT (CN1303) ON SCHEMATIC DIAGRAM-10
H600/W600
PHOTO
MOTOR
PLUNGER
GND2
DVREF+
DECK_AD1
DECK_AD2
DMT
BP1
REC
TAPE_EJECT
Q904 KRC101STA MOTOR SWITCH
Q905 KRC101STA PLUNGER SWITCH
Q902 KRC101STA STATUS SWITCH
Q901 KRC101STA SUBQ SWITCH
Q903 KRC101STA BLKCLK SWITCH
Q613, 615 KRC119STA LED DRIVE
Q610 KTA1504GRTA DECK SUPPLY CONTROL
Q611 KRC120STA PCONT SWITCH
Q607 KRC103STA RESET SWITCH
Q608, 609 KTC3875GRTA µ-P BEAT PROOF CONTROL
R687 68
R688 68
D632 UDZSTE174R7B
L605 G0C101JA0027
C646 50V3.3
FL1
FL2
-VP
+9V
DVREF+
MOTOR
PLUNGER
VREF+
STATUS
RESTSW
PCONT
BLKCLK
SUBQ
SYS6V
R900 10K
R901 10K
R902 10K
R903 10K
R904 12K
R905 4.7K
R906 4.7K
R907 4.7K
R685 470K
R686 4.7K
R658 220
R671 220
R700 220
R701 220
D637 B3CNE0000001
D636 B3CNE0000001
R672 0
D631 B0ACCK000005
C657 100P
C658 100P
C659 100P
R644 R645 R646 R647 R648 R651 R652 R653 R654 R655 R656 R657 47K
R659 47K
R668 22K
PLUNGER
EE_CS
EE_CLK/EX1_CLK
DMT
BP1
REC
SSEQ
MUTE_H
MUTE_A
MOTOR
PCONT
RESTSW
EE_DAT/EX1_DAT
ST_SW
M2_ROUT
M2_FOUT
OPEN_SW
POS
DCDET
R639 2.2K
R930 1K
R697 100
R695 100
R600 0
R699 100
R624 100
R680 1K
CDRST
SQCLK/DO
R910 4.7K
R911 10K
R912 100
D640 RB501V-40
R913 5.6K
D641 - 643 RB501V-40
R914 5.6K
R915 5.6K
R916 5.6K
R917 100
R918 100
R919 100
D641
D642
D643
MDATA/PLLDA
MCLK/PLLCK
R920 100K
R921 100K
R922 100K
D644 B0ACCK000005
/CD
D645 B0ACCK000005
R923 22K
C651 0.1
C654 100P
C655 100P
C656 100P
C660 100P
C664 0.1
VREF+
CD3.3V
CDR
CDL
CDAGND
R924 10K
C652 100P
C653 100P
CN606
LOADING
REST_SW
RST
STAT
SUBQ
SQCK
BLKCK
MLD
MDATA
MCLK
PGND
TX
+7.5V
DGND
LD_SW
CD3.3V
Rch_OUT
AGND
Lch_OUT
TO A CD SERVO CIRCUIT (CN702) ON SCHEMATIC DIAGRAM - 2
R625 4.7K
R626 4.7K
R627 47K
R628 47K
R681 10K
R682 470
SYNC
C645 50V2.2
D630 B0ACCK000005
R683 47K
C641 0.01
R684 22K
C642 100P
C643 100P
C644 50V1
Q607
R670 680
C633 68P
C634 68P
X600 RSXZ4M19B01T
R673 330K
R674 10M
X601 RSXD32K7S02
C635 18P
C636 22P
C637 56P
C638 56P
C639 1000P
C640 1000P
Q608
Q609
R675 4.7K
R676 4.7K
PLLCE
MDATA/PLLDA
MCLK/PLLCK
SQCLK/DO
SD
PLAY_SW
ST_SW
M1_ROUT
M1_FOUT
OPEN_SW
POS
BT_SW
M2_ROUT
M2_FOUT
ASP_DATA
ASP_LATCH
ASP_CLK
DCDET
D650 B0ACCK000005
7.5V
CDL
CDAGND
CDR
CD3.3V
+9V
RDS_DATA
RDS_CLOCK
R925 22K
TX
9V
RDS_DA/VOC_B
RDS_CLK/VOC_C
CN602
TO B MAIN CIRCUIT (CN305) ON SCHEMATIC DIAGRAM - 6
R638 100
MUTE_A
SSEQ
CDDGND
CD3.3V
MUTE_H
DCDET
/CD
PGND
HP_L
HP_GND
HP_R
HP_SW
R708 47K
VREF+
FL1
FL2
-VP
SYS6V
SYNC (ECONO)
PCONT
GND2
CN608
H604/W604
TO G POWER CIRCUIT (CN500) ON SCHEMATIC DIAGRAM -11
TO H AC TRANSFORMER CIRCUIT (CN505) ON SCHEMATIC DIAGRAM -13

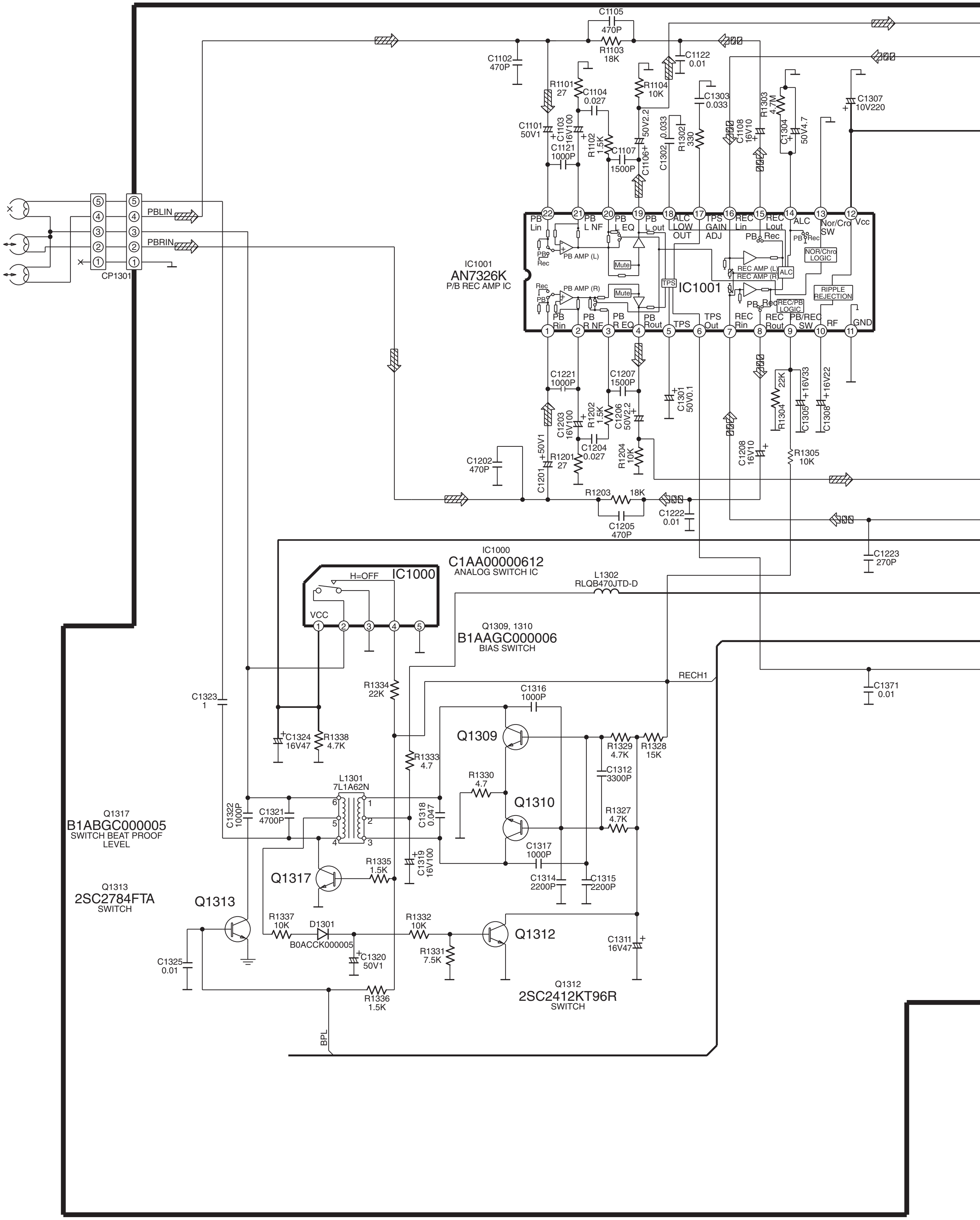
SCHEMATIC DIAGRAM-9

D DECK CIRCUIT

—— : +B SIGNAL LINE

▨⇨ : PLAYBACK SIGNAL LINE

▨⇨ : REC SIGNAL LINE


C1105
470P
R1103
18K
C1102
470P
C1122
0.01
R1101
27
C1104
0.027
R1104
10K
C1303
0.033
R1303
4.7M
C1307
10V220
C1101
50V1
C1103
16V100
C1121
1000P
R1102
1.5K
C1107
1500P
C1106
50V2.2
C1302
0.033
R1302
330
C1108
16V10
C1304
50V4.7
CP1301
PBLIN
PBRIN
IC1001
AN7326K
P/B REC AMP IC
PB Lin
PB L NF
PB L EQ
PB L out
ALC LOW OUT
TPS GAIN ADJ
REC Lin
REC Lout
ALC
Nor/Cro SW
Vcc
PB AMP (L)
PB AMP (R)
Mute
TPS
IC1001
REC AMP (L)
REC AMP (R)
NOR/Chro LOGIC
RIPPLE REJECTION
REC/PB LOGIC
PB Rin
PB R NF
PB R EQ
PB Rout
TPS
TPS Out
REC Rin
REC Rout
PB/REC SW
RF
GND
C1221
1000P
C1207
1500P
C1301
50V0.1
R1304
22K
C1305
16V33
C1308
16V22
C1203
16V100
R1202
1.5K
C1206
50V2.2
C1204
0.027
C1201
50V1
R1201
27
R1204
10K
C1208
16V10
R1305
10K
C1202
470P
R1203
18K
C1222
0.01
C1205
470P
C1223
270P
IC1000
C1AA00000612
ANALOG SWITCH IC
H=OFF
IC1000
VCC
L1302
RLQB470JTD-D
Q1309, 1310
B1AAGC000006
BIAS SWITCH
RECH1
C1371
0.01
R1334
22K
C1316
1000P
C1323
1
C1324
16V47
R1338
4.7K
Q1309
R1329
4.7K
R1328
15K
R1333
4.7
C1312
3300P
L1301
7L1A62N
R1330
4.7
Q1310
R1327
4.7K
Q1317
B1ABGC000005
SWITCH BEAT PROOF LEVEL
C1322
1000P
C1321
4700P
C1318
0.047
C1317
1000P
Q1317
R1335
1.5K
C1319
16V100
C1314
2200P
C1315
2200P
Q1313
2SC2784FTA
SWITCH
Q1313
R1337
10K
D1301
B0ACCK000005
R1332
10K
Q1312
C1311
16V47
C1325
0.01
C1320
50V1
R1331
7.5K
R1336
1.5K
Q1312
2SC2412KT96R
SWITCH
BPL

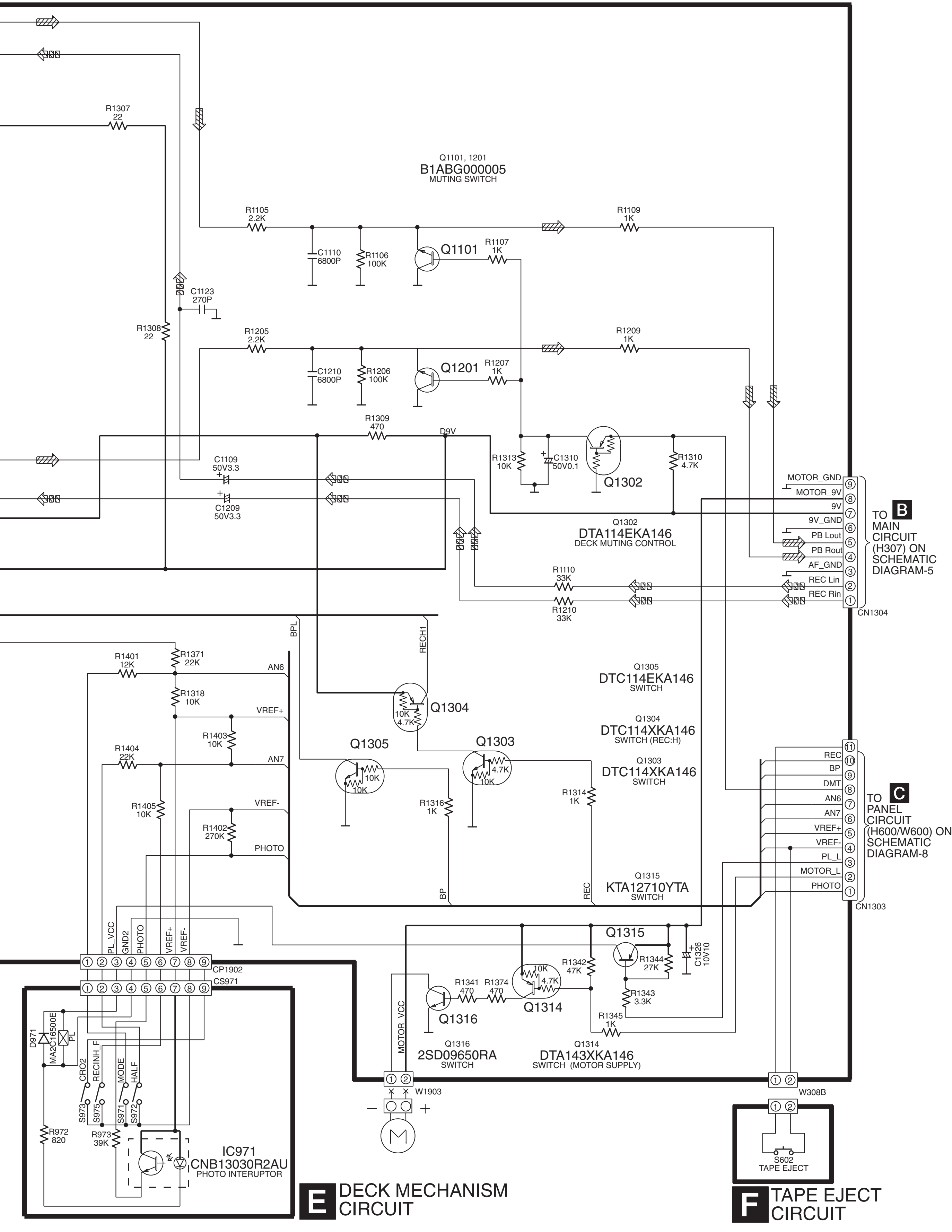
SCHEMATIC DIAGRAM-10

D DECK CIRCUIT

▨⇒ : PLAYBACK SIGNAL LINE

—— : +B SIGNAL LINE

▨⇒ : REC SIGNAL LINE

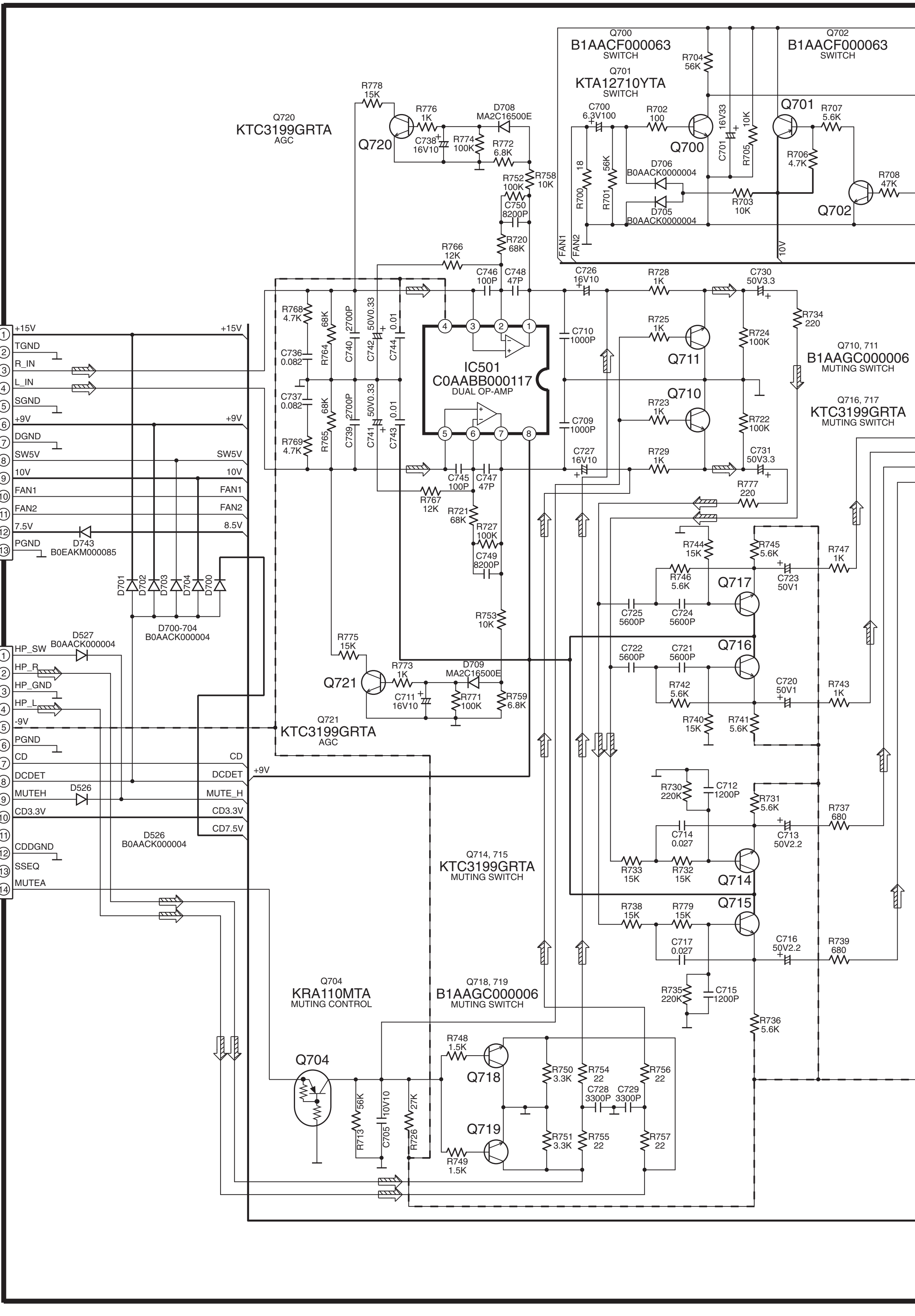


R1307
22
R1308
22
Q1101, 1201
B1ABG000005
MUTING SWITCH
R1105
2.2K
C1110
6800P
R1106
100K
Q1101
R1107
1K
R1109
1K
C1123
270P
R1205
2.2K
C1210
6800P
R1206
100K
Q1201
R1207
1K
R1209
1K
R1309
470
D9V
C1109
50V3.3
C1209
50V3.3
R1313
10K
C1310
50V0.1
Q1302
R1310
4.7K
Q1302
DTA114EKA146
DECK MUTING CONTROL
R1110
33K
R1210
33K
MOTOR_GND
MOTOR_9V
9V
9V_GND
PB Lout
PB Rout
AF_GND
REC Lin
REC Rin
CN1304
TO B MAIN CIRCUIT (H307) ON SCHEMATIC DIAGRAM-5
BPL
RECH1
R1401
12K
R1371
22K
AN6
R1318
10K
VREF+
R1403
10K
R1404
22K
AN7
R1405
10K
VREF-
R1402
270K
PHOTO
Q1304
10K
4.7K
Q1305
10K
10K
Q1303
4.7K
10K
R1316
1K
R1314
1K
BP
REC
Q1305
DTC114EKA146
SWITCH
Q1304
DTC114XKA146
SWITCH (REC:H)
Q1303
DTC114XKA146
SWITCH
Q1315
KTA12710YTA
SWITCH
REC
BP
DMT
AN6
AN7
VREF+
VREF-
PL_L
MOTOR_L
PHOTO
CN1303
TO C PANEL CIRCUIT (H600/W600) ON SCHEMATIC DIAGRAM-8
PL_VCC
GND2
PHOTO
VREF+
VREF-
CP1902
CS971
Q1315
R1344
27K
C1326
10V10
R1342
47K
R1343
3.3K
R1341
470
R1374
470
Q1314
10K
4.7K
Q1316
R1345
1K
MOTOR_VCC
Q1316
2SD09650RA
SWITCH
Q1314
DTA143XKA146
SWITCH (MOTOR SUPPLY)
W1903
−
+
M
W308B
S602
TAPE EJECT
D971
MA2C16500E
PL
CRO2
RECINH_F
MODE
HALF
S973
S975
S971
S972
R972
820
R973
39K
IC971
CNB13030R2AU
PHOTO INTERUPTOR
E DECK MECHANISM CIRCUIT
F TAPE EJECT CIRCUIT

SCHEMATIC DIAGRAM - 11

G POWER CIRCUIT

- - - : -B SIGNAL LINE
——— : +B SIGNAL LINE
⇨ : MAIN SIGNAL LINE

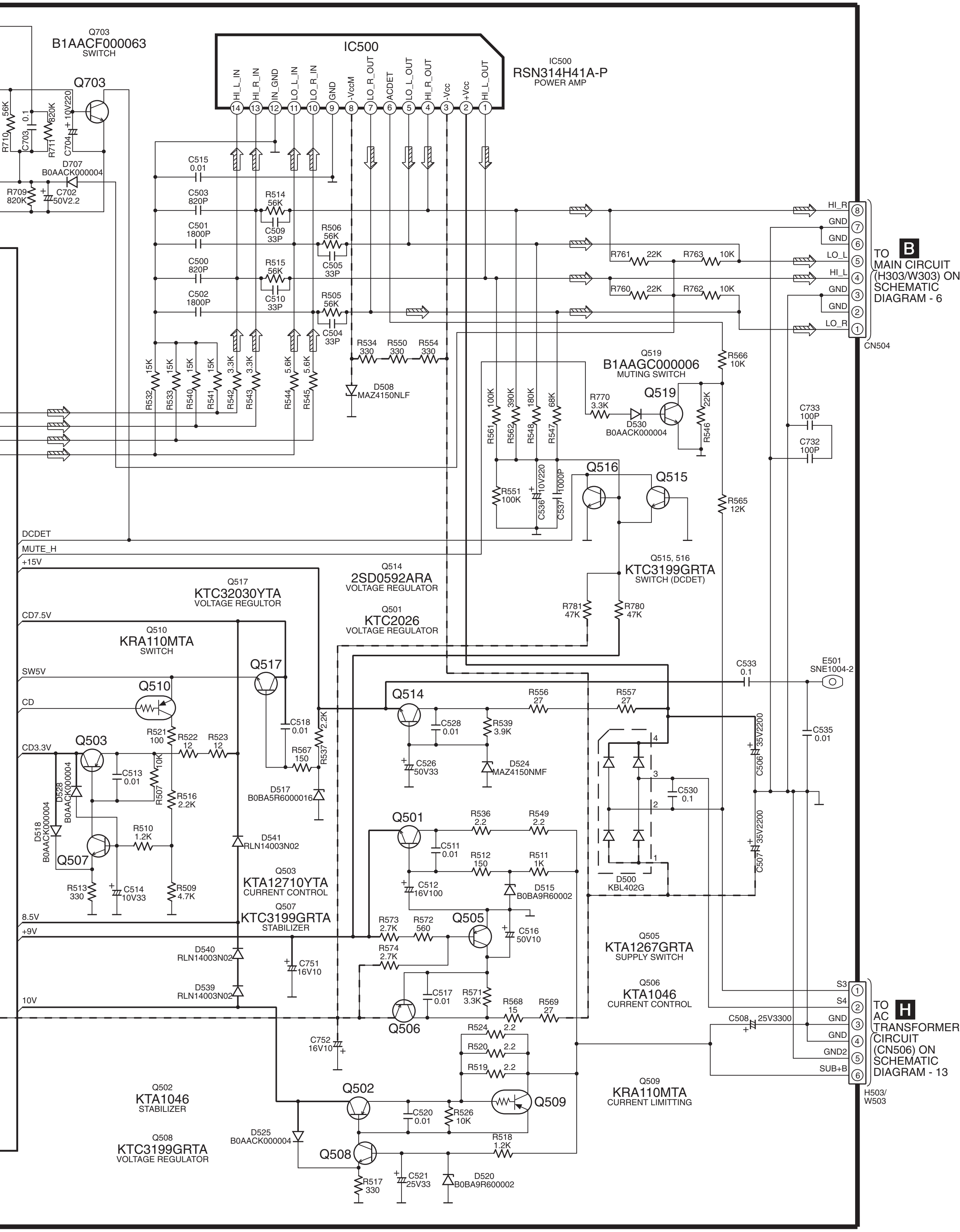


Q700
B1AACF000063
SWITCH
Q701
KTA12710YTA
SWITCH
Q702
B1AACF000063
SWITCH
R704 56K
C700 6.3V100
R702 100
Q700
16V33
C701
10K
R705
Q701
R707 5.6K
R706 4.7K
R708 47K
Q702
R700 18
R701 56K
D706 B0AACK0000004
D705 B0AACK0000004
R703 10K
FAN1
FAN2
10V
R778 15K
Q720
KTC3199GRTA
AGC
Q720
R776 1K
C738 16V10
R774 100K
D708 MA2C16500E
R772 6.8K
R752 100K
R758 10K
C750 8200P
R720 68K
R766 12K
C746 100P
C748 47P
C726 16V10
R728 1K
C730 50V3.3
R734 220
R768 4.7K
68K
R764
2700P
C740
50V0.33
C742
0.01
C744
C736 0.082
C737 0.082
68K
R765
2700P
C739
50V0.33
C741
0.01
C743
R769 4.7K
IC501
C0AABB000117
DUAL OP-AMP
C710 1000P
C709 1000P
R725 1K
Q711
R724 100K
Q710
R723 1K
R722 100K
Q710, 711
B1AAGC000006
MUTING SWITCH
Q716, 717
KTC3199GRTA
MUTING SWITCH
C745 100P
C747 47P
C727 16V10
R729 1K
C731 50V3.3
R767 12K
R721 68K
R727 100K
C749 8200P
R777 220
R753 10K
R744 15K
R745 5.6K
R747 1K
R746 5.6K
C723 50V1
Q717
C725 5600P
C724 5600P
Q716
C722 5600P
C721 5600P
R742 5.6K
C720 50V1
R743 1K
R740 15K
R741 5.6K
R775 15K
Q721
R773 1K
D709 MA2C16500E
C711 16V10
R771 100K
R759 6.8K
Q721
KTC3199GRTA
AGC
TO B MAIN CIRCUIT (CN301) ON SCHEMATIC DIAGRAM - 6
+15V
TGND
R_IN
L_IN
SGND
+9V
DGND
SW5V
10V
FAN1
FAN2
7.5V
PGND
+15V
+9V
SW5V
10V
FAN1
FAN2
8.5V
D743 B0EAKM000085
CP501
D701 D702 D703 D704 D705 D700
D700-704 B0AACK000004
TO C PANEL CIRCUIT (CN608) ON SCHEMATIC DIAGRAM - 8
HP_SW
HP_R
HP_GND
HP_L
-9V
PGND
CD
DCDET
MUTEH
CD3.3V
CDDGND
SSEQ
MUTEA
D527 B0AACK000004
D526
CD
DCDET
+9V
MUTE_H
CD3.3V
CD7.5V
D526 B0AACK000004
CN500
R730 220K
C712 1200P
R731 5.6K
R737 680
C714 0.027
C713 50V2.2
R733 15K
R732 15K
Q714
Q714, 715
KTC3199GRTA
MUTING SWITCH
Q715
R738 15K
R779 15K
C717 0.027
C716 50V2.2
R739 680
R735 220K
C715 1200P
R736 5.6K
Q704
KRA110MTA
MUTING CONTROL
Q718, 719
B1AAGC000006
MUTING SWITCH
Q704
R748 1.5K
Q718
R750 3.3K
R754 22
R756 22
C728 3300P
C729 3300P
R713 56K
C705 10V10
R726 27K
Q719
R749 1.5K
R751 3.3K
R755 22
R757 22

SCHEMATIC DIAGRAM - 12

G POWER CIRCUIT

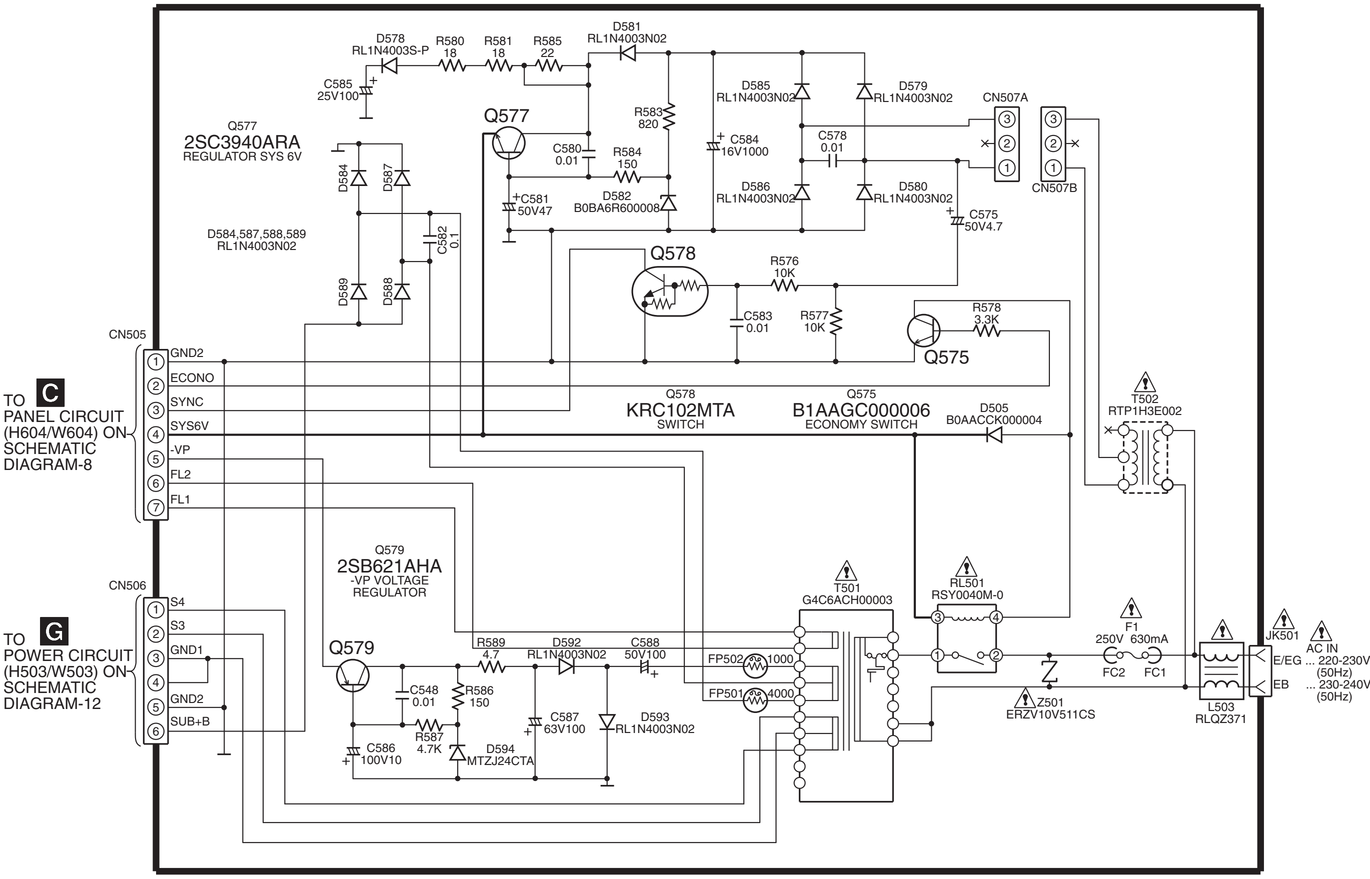
- - - : -B SIGNAL LINE
—— : +B SIGNAL LINE
⇨ : MAIN SIGNAL LINE


Q703
B1AACF000063
SWITCH
Q703
R710 56K
C703 0.1
R711 820K
C704 10V220
D707
B0AACK000004
R709 820K
C702 50V2.2
IC500
HI_L_IN
HI_R_IN
IN_GND
LO_L_IN
LO_R_IN
GND
-VccM
LO_R_OUT
ACDET
LO_L_OUT
HI_R_OUT
-Vcc
+Vcc
HI_L_OUT
14
13
12
11
10
9
8
7
6
5
4
3
2
1
IC500
RSN314H41A-P
POWER AMP
C515 0.01
C503 820P
R514 56K
C509 33P
C501 1800P
R506 56K
C505 33P
C500 820P
R515 56K
C510 33P
C502 1800P
R505 56K
C504 33P
R532 15K
R533 15K
R540 15K
R541 15K
R542 3.3K
R543 3.3K
R544 5.6K
R545 5.6K
R534 330
R550 330
R554 330
D508
MAZ4150NLF
R761 22K
R763 10K
R760 22K
R762 10K
HI_R
GND
GND
LO_L
HI_L
GND
GND
LO_R
8
7
6
5
4
3
2
1
CN504
TO B MAIN CIRCUIT (H303/W303) ON SCHEMATIC DIAGRAM - 6
R566 10K
Q519
B1AAGC000006
MUTING SWITCH
Q519
R770 3.3K
D530
B0AACK000004
R546 22K
C733 100P
C732 100P
R561 100K
R562 390K
R548 180K
R547 68K
R551 100K
C536 10V220
C537 1000P
Q516
Q515
R565 12K
DCDET
MUTE_H
+15V
Q515, 516
KTC3199GRTA
SWITCH (DCDET)
Q514
2SD0592ARA
VOLTAGE REGULATOR
Q517
KTC32030YTA
VOLTAGE REGULTOR
Q501
KTC2026
VOLTAGE REGULATOR
R781 47K
R780 47K
CD7.5V
Q510
KRA110MTA
SWITCH
SW5V
Q517
Q510
CD
C533 0.1
E501
SNE1004-2
Q514
R556 27
R557 27
C518 0.01
R537 2.2K
C528 0.01
R539 3.9K
C535 0.01
C506 35V2200
R521 100
R522 12
R523 12
CD3.3V
Q503
C513 0.01
R507 10K
R516 2.2K
R567 150
D517
B0BA5R6000016
C526 50V33
D524
MAZ4150NMF
4
3
2
1
C530 0.1
D528 B0AACK000004
D518 B0AACK000004
R510 1.2K
Q507
D541
RLN14003N02
Q501
R536 2.2
R549 2.2
C511 0.01
R512 150
R511 1K
C512 16V100
D515
B0BA9R60002
D500
KBL402G
C507 35V2200
R513 330
C514 10V33
R509 4.7K
Q503
KTA12710YTA
CURRENT CONTROL
Q507
KTC3199GRTA
STABILIZER
8.5V
+9V
R573 2.7K
R572 560
Q505
C516 50V10
Q505
KTA1267GRTA
SUPPLY SWITCH
D540
RLN14003N02
C751 16V10
R574 2.7K
D539
RLN14003N02
10V
C517 0.01
R571 3.3K
R568 15
R569 27
Q506
KTA1046
CURRENT CONTROL
Q506
S3
S4
GND
GND
GND2
SUB+B
1
2
3
4
5
6
H503/ W503
TO H AC TRANSFORMER CIRCUIT (CN506) ON SCHEMATIC DIAGRAM - 13
C508 25V3300
R524 2.2
R520 2.2
R519 2.2
C752 16V10
Q502
KTA1046
STABILIZER
Q502
C520 0.01
R526 10K
Q509
Q509
KRA110MTA
CURRENT LIMITTING
D525
B0AACK000004
R518 1.2K
Q508
KTC3199GRTA
VOLTAGE REGULATOR
Q508
R517 330
C521 25V33
D520
B0BA9R600002

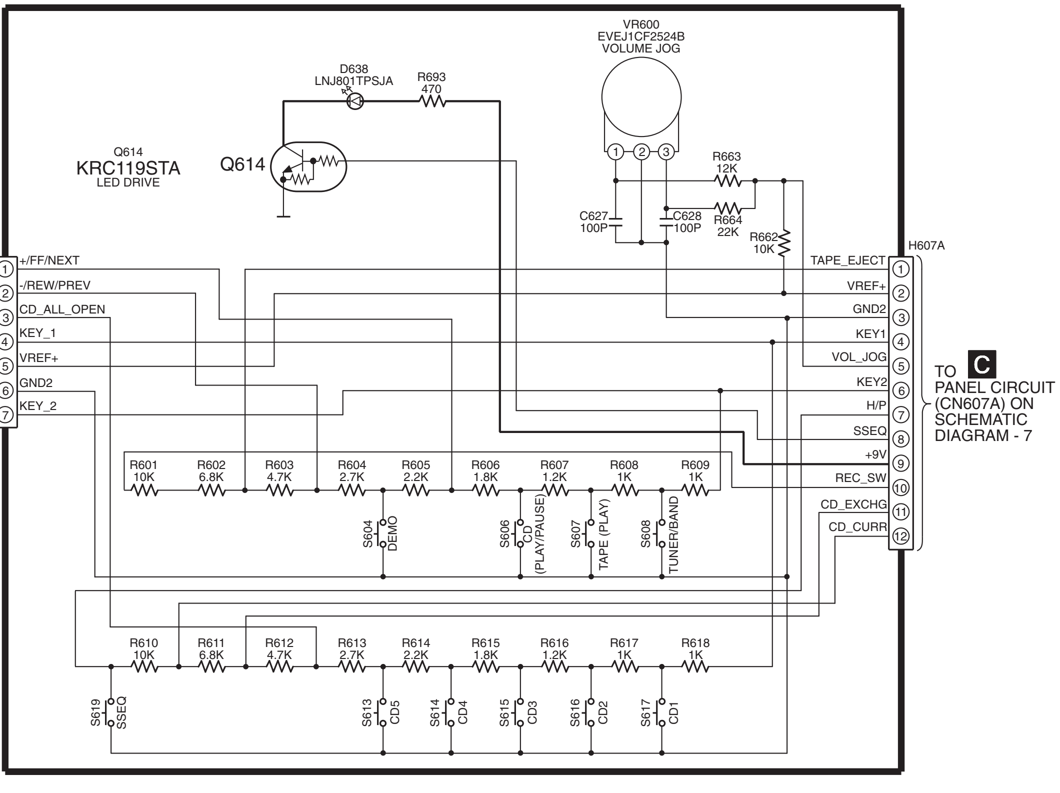
SCHEMATIC DIAGRAM-13

H AC TRANSFORMER CIRCUIT

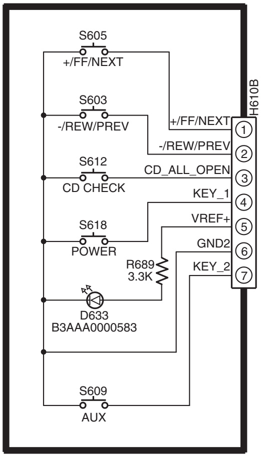
——— : +B SIGNAL LINE


D578
RL1N4003S-P
R580
18
R581
18
R585
22
D581
RL1N4003N02
C585
25V100
Q577
2SC3940ARA
REGULATOR SYS 6V
Q577
C580
0.01
R584
150
R583
820
C581
50V47
D582
B0BA6R600008
D584
D587
D589
D588
D584,587,588,589
RL1N4003N02
C582
0.1
C584
16V1000
D585
RL1N4003N02
D586
RL1N4003N02
C578
0.01
D579
RL1N4003N02
D580
RL1N4003N02
C575
50V4.7
CN507A
CN507B
Q578
R576
10K
C583
0.01
R577
10K
R578
3.3K
Q575
CN505
GND2
ECONO
SYNC
SYS6V
-VP
FL2
FL1
TO C PANEL CIRCUIT (H604/W604) ON SCHEMATIC DIAGRAM-8
Q578
KRC102MTA
SWITCH
Q575
B1AAGC000006
ECONOMY SWITCH
D505
B0AACCK000004
T502
RTP1H3E002
Q579
2SB621AHA
-VP VOLTAGE REGULATOR
CN506
S4
S3
GND1
GND2
SUB+B
TO G POWER CIRCUIT (H503/W503) ON SCHEMATIC DIAGRAM-12
Q579
R589
4.7
D592
RL1N4003N02
C588
50V100
C548
0.01
R586
150
R587
4.7K
C586
100V10
D594
MTZJ24CTA
C587
63V100
D593
RL1N4003N02
FP502
1000
FP501
4000
T501
G4C6ACH00003
RL501
RSY0040M-0
F1
250V 630mA
FC2
FC1
Z501
ERZV10V511CS
L503
RLQZ371
JK501
E/EG
EB
AC IN
... 220-230V (50Hz)
... 230-240V (50Hz)

I TACT SWITCH CIRCUIT


D638
LNJ801TPSJA
R693
470
VR600
EVEJ1CF2524B
VOLUME JOG
Q614
KRC119STA
LED DRIVE
Q614
R663
12K
R664
22K
C627
100P
C628
100P
R662
10K
H610A
+/FF/NEXT
-/REW/PREV
CD_ALL_OPEN
KEY_1
VREF+
GND2
KEY_2
H607A
TAPE_EJECT
VREF+
GND2
KEY1
VOL_JOG
KEY2
H/P
SSEQ
+9V
REC_SW
CD_EXCHG
CD_CURR
TO C PANEL CIRCUIT (CN607A) ON SCHEMATIC DIAGRAM - 7
R601
10K
R602
6.8K
R603
4.7K
R604
2.7K
R605
2.2K
R606
1.8K
R607
1.2K
R608
1K
R609
1K
S604
DEMO
S606
CD (PLAY/PAUSE)
S607
TAPE (PLAY)
S608
TUNER/BAND
R610
10K
R611
6.8K
R612
4.7K
R613
2.7K
R614
2.2K
R615
1.8K
R616
1.2K
R617
1K
R618
1K
S619
SSEQ
S613
CD5
S614
CD4
S615
CD3
S616
CD2
S617
CD1

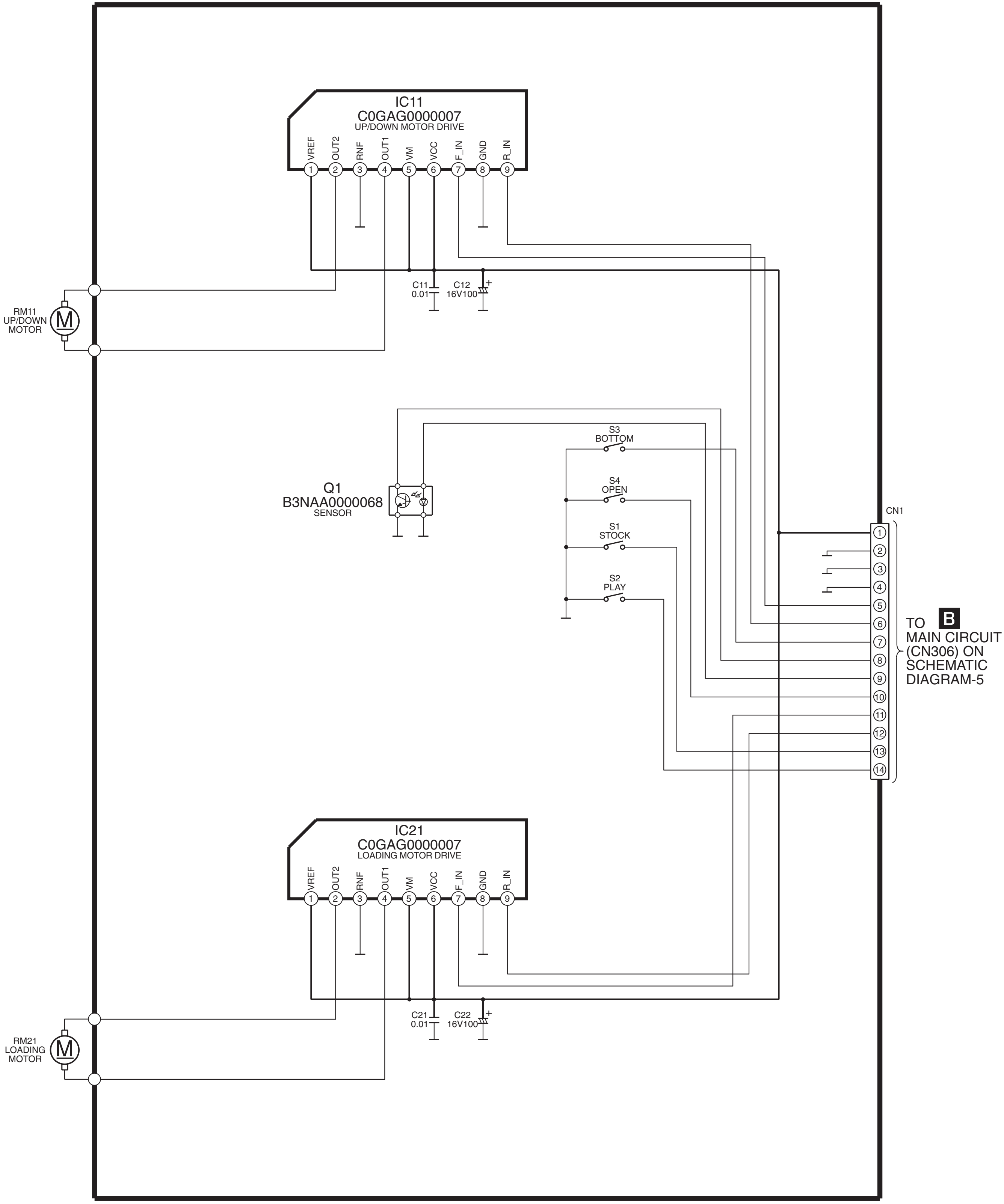
J AC LED CIRCUIT

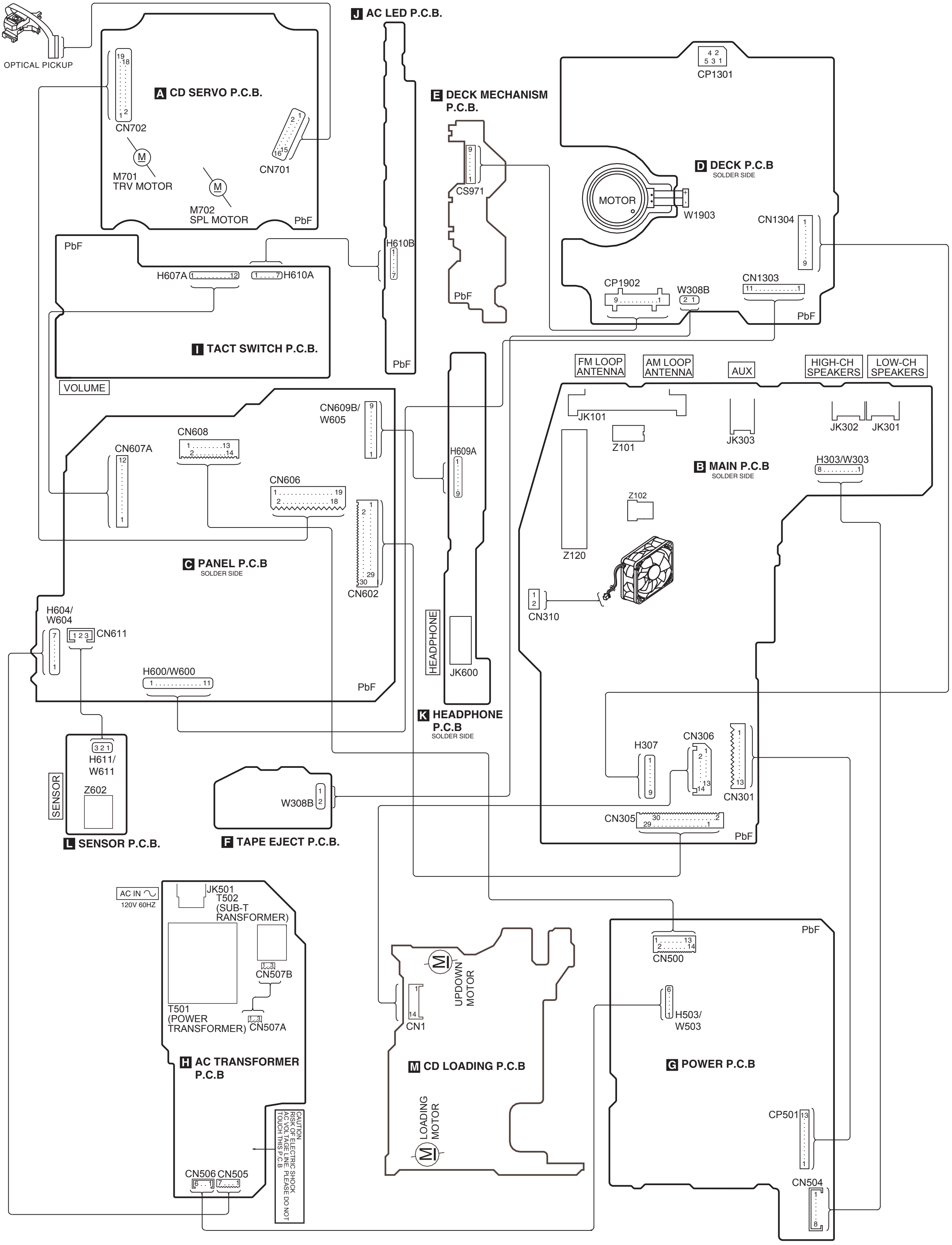

S605
+/FF/NEXT
S603
-/REW/PREV
S612
CD CHECK
S618
POWER
R689
3.3K
D633
B3AAA0000583
S609
AUX
H610B
+/FF/NEXT
-/REW/PREV
CD_ALL_OPEN
KEY_1
VREF+
GND2
KEY_2

SCHEMATIC DIAGRAM-14

M CD LOADING CIRCUIT

——— : +B SIGNAL LINE


IC11
C0GAG0000007
UP/DOWN MOTOR DRIVE
VREF
OUT2
RNF
OUT1
VM
VCC
F_IN
GND
R_IN
1
2
3
4
5
6
7
8
9
C11
0.01
C12
16V100
+
RM11
UP/DOWN
MOTOR
M
Q1
B3NAA0000068
SENSOR
S3
BOTTOM
S4
OPEN
S1
STOCK
S2
PLAY
CN1
1
2
3
4
5
6
7
8
9
10
11
12
13
14
TO B
MAIN CIRCUIT
(CN306) ON
SCHEMATIC
DIAGRAM-5
IC21
C0GAG0000007
LOADING MOTOR DRIVE
VREF
OUT2
RNF
OUT1
VM
VCC
F_IN
GND
R_IN
1
2
3
4
5
6
7
8
9
C21
0.01
C22
16V100
+
RM21
LOADING
MOTOR
M


OPTICAL PICKUP
J AC LED P.C.B.
A CD SERVO P.C.B.
CN702
CN701
M701
TRV MOTOR
M702
SPL MOTOR
PbF
E DECK MECHANISM P.C.B.
CS971
CP1301
D DECK P.C.B
SOLDER SIDE
MOTOR
W1903
CN1304
CP1902
W308B
CN1303
H610B
H607A
H610A
I TACT SWITCH P.C.B.
VOLUME
FM LOOP ANTENNA
AM LOOP ANTENNA
AUX
HIGH-CH SPEAKERS
LOW-CH SPEAKERS
JK101
Z101
JK303
JK302
JK301
B MAIN P.C.B
SOLDER SIDE
H303/W303
Z102
Z120
CN310
CN609B/
W605
CN608
CN607A
CN606
CN602
H609A
C PANEL P.C.B
SOLDER SIDE
H604/
W604
CN611
H600/W600
HEADPHONE
JK600
K HEADPHONE P.C.B
SOLDER SIDE
H307
CN306
CN301
CN305
H611/
W611
Z602
SENSOR
L SENSOR P.C.B.
W308B
F TAPE EJECT P.C.B.
AC IN ∿
120V 60HZ
JK501
T502
(SUB-T
RANSFORMER)
CN507B
T501
(POWER
TRANSFORMER)
CN507A
H AC TRANSFORMER P.C.B
CAUTION
RISK OF ELECTRIC SHOCK
AC VOLTAGE LINE, PLEASE DO NOT
TOUCH THIS P.C.B
CN506
CN505
UPDOWN MOTOR
CN1
M CD LOADING P.C.B
LOADING MOTOR
CN500
H503/
W503
G POWER P.C.B
CP501
CN504

ORDER NO. MD0611352SE
A6

Service Manual

CD Stereo System

Supplement

SA-PM18P
SA-PM18PC
SA-PM18E
SA-PM18EB
SA-PM18EG
SA-PM18GN
SA-PM18GD

Colour

(S) .... Silver Type

Subject : DELETE MODEL

Note: This Supplement is issued to replace the earlier Parts Change Notice Order No. MD0411520P0. Please ignore the earlier Parts Change Notice issued.

⚠ **WARNING**

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

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ORDER NO. MD0506234S0
A6

Service Manual

CD Stereo System

Supplement

SA-PM18P / SA-PM18PC / SA-PM18E / SA-PM18EB / SA-PM18EG / SA-PM18GD / SA-PM18GN

Colour
(S) ... Silver Type

Correction of Cabinet Parts Location
Please use this supplement manual together with the service manual for Model No. [SA-PM18P/PC-S, Order No. MD0301010C1], [SA-PM18E/EB/EG-S, Order No. MD0303097C2] & [SA-PM18GD/GN-S, Order No. MD0305179C3].

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⚠ WARNING
This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

Panasonic

1. Parts Location & Replacement Parts List

The cabinet drawing below was changed due to part number in parts list different from actual service part number.

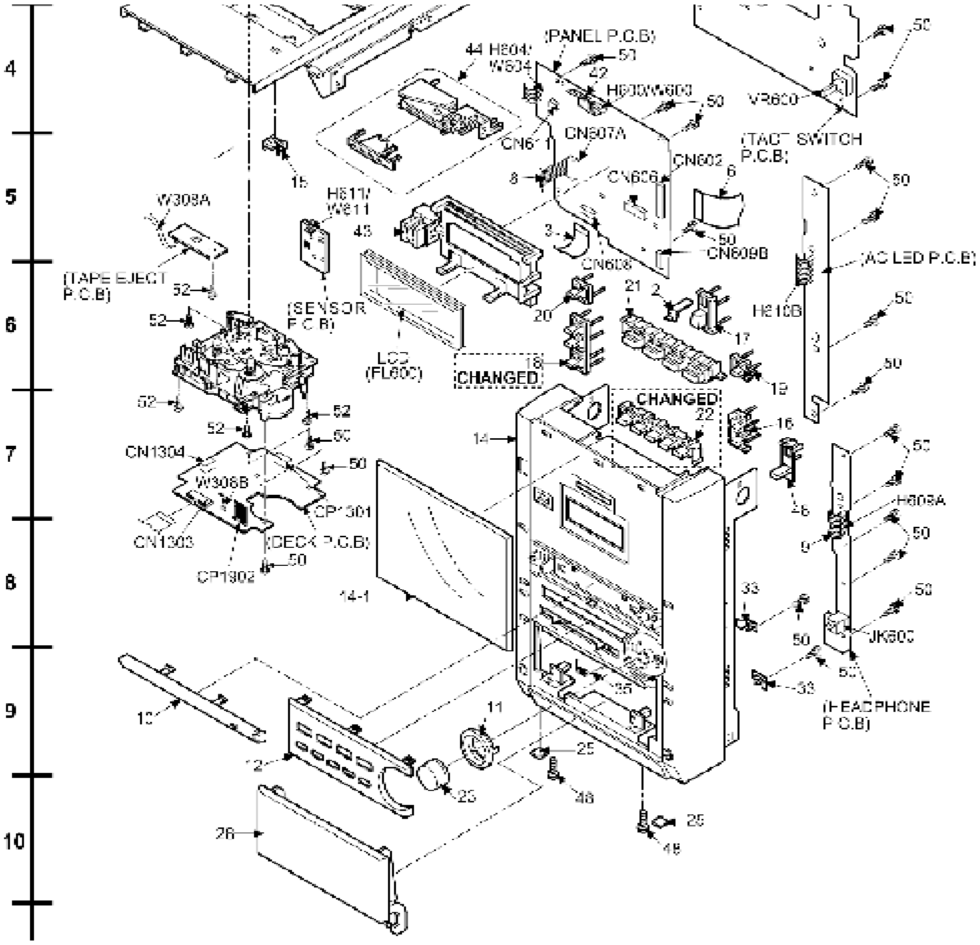
With reference to Original Service Manual (Section 19.3) on page 98 for Model No. SA-PM18P/PC-S.

With reference to Original Service Manual (Section 20.3) on page 103 for Model No. SA-PM18E/EB/EG-S.

With reference to Original Service Manual (Section 19.3) on page 104 for Model No. SA-PM18GD/GN-S.

1.1. Cabinet

1.1.1. Cabinet Parts Location (Correction)


4
5
6
7
8
9
10
(PANEL P.C.B)
44 H604/W604
51
42
H600/W600
50
VR600
(TACT SWITCH P.C.B)
CN601
CN607A
CN602
6
8
CN606
15
W308A
H611/W611
43
3
50
CN609B
(AC LED P.C.B)
CN608
21
2
H610B
(TAPE EJECT P.C.B)
52
(SENSOR P.C.B)
20
17
LCD (FL600)
18
CHANGED
19
CHANGED
22
14
16
CN1304
W308B
CP1301
CN1303
(DECK P.C.B)
CP1302
H609A
9
14-1
33
JK600
(HEADPHONE P.C.B)
10
11
12
23
25
48
26
35

M0506 N/J